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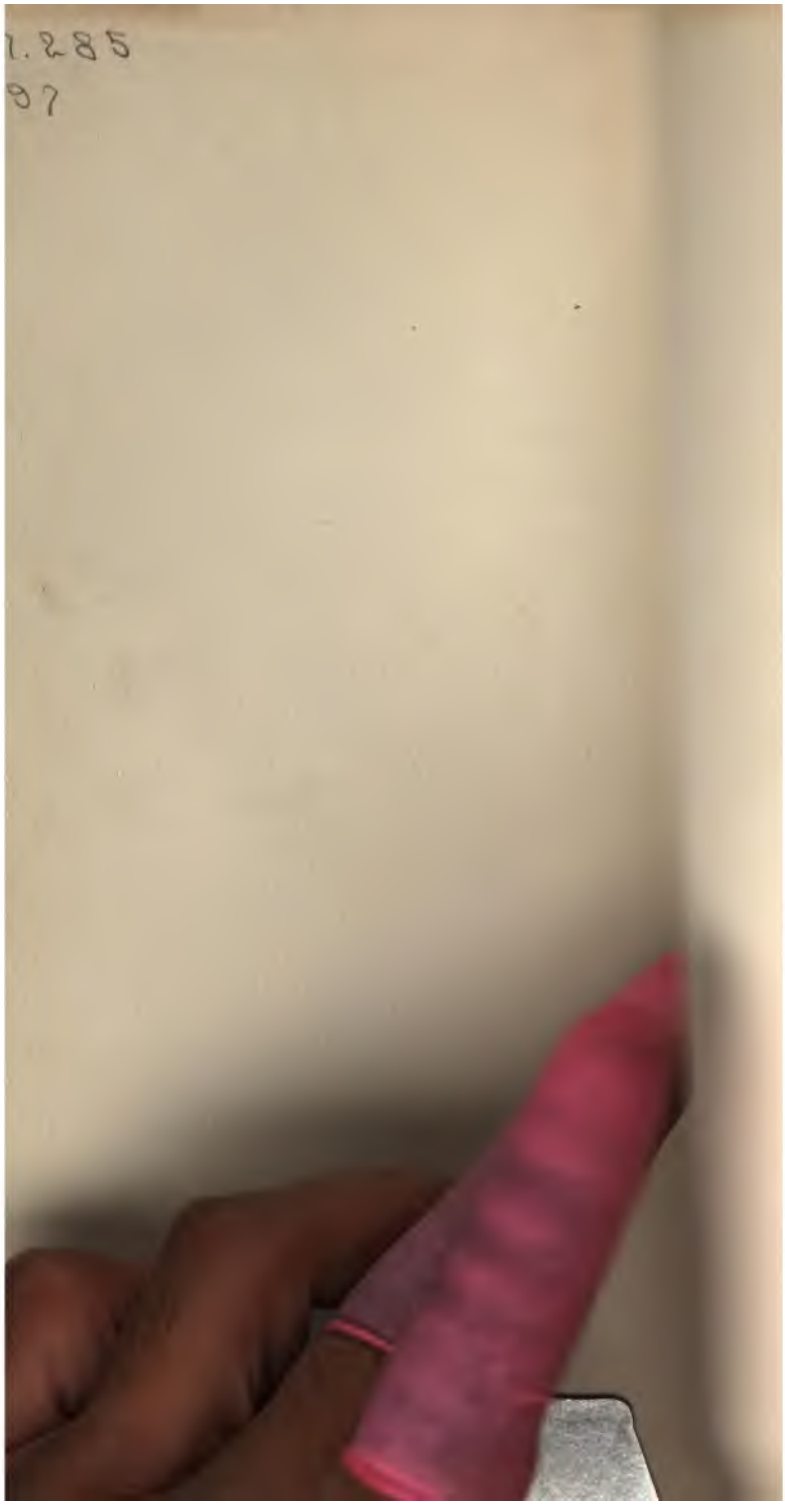

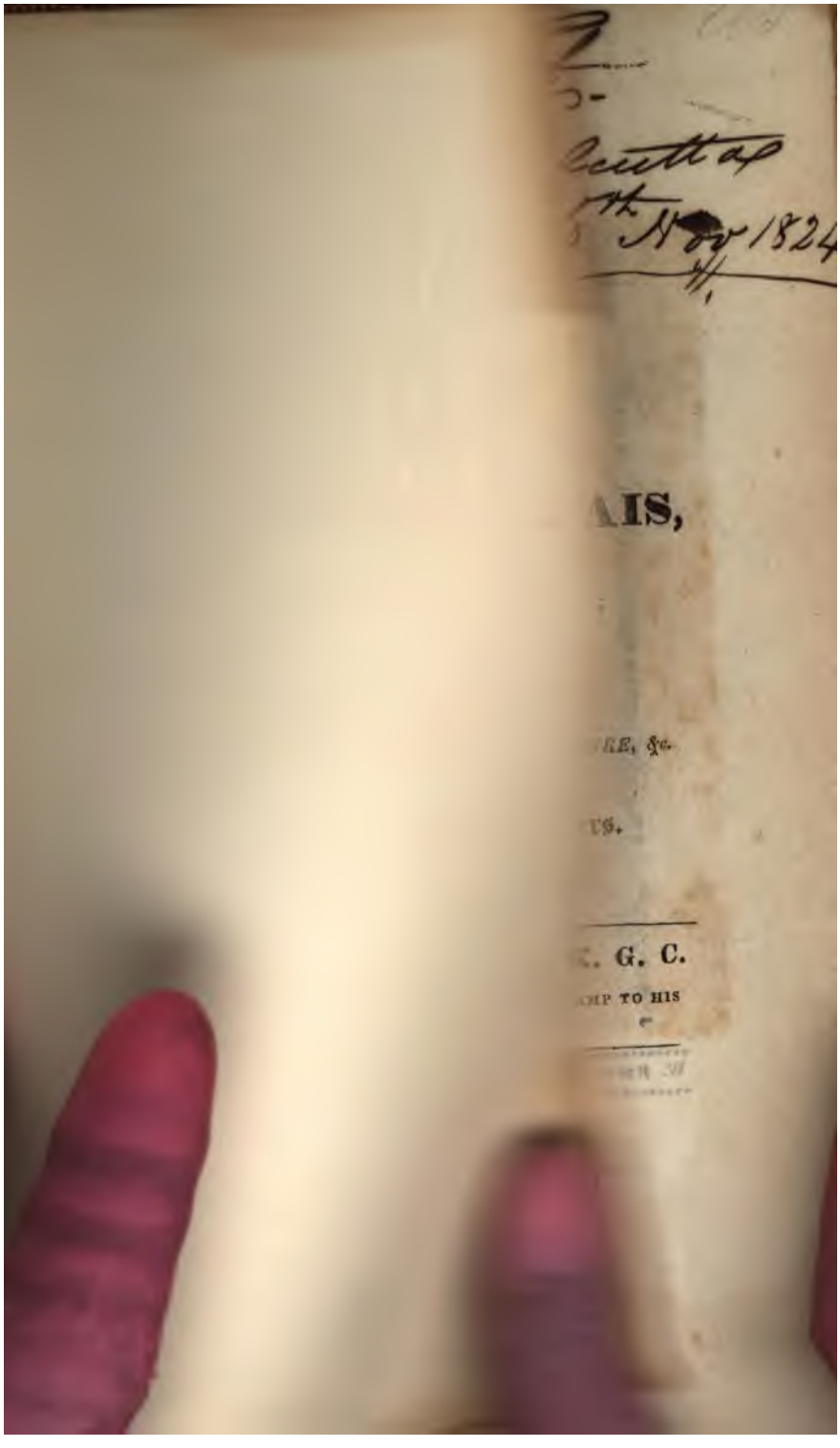

Painted by J. S. Rouhard — Engraved by W. H. Lizars

His Highness Gregor Cazique of Poyais

William Smith.

SKETCH

Calcutta 6th Nov 18

OF THE

MOSQUITO SHORE,

INCLUDING THE

TERRITORY OF POYAIS,

DESCRIPTIVE OF THE COUNTRY;

WITH SOME INFORMATION AS TO

ITS PRODUCTIONS, THE BEST MODE OF CULTURE, &c.

Chiefly intended for the Use of Settlers.

BY THOMAS STRANGEWAYS, K. G. C.

CAPTAIN 1st NATIVE POYER REGIMENT, AND AID-DE-CAMP TO HIS HIGHNESS GREGOR, CAZIQUE OF POYAIS.

EDINBURGH:

SOLD BY WILLIAM BLACKWOOD, EDINBURGH;
AND T. CADDELL, STRAND, LONDON.

1822.

W. Reid, Printer, Leith.

156324

TO HIS HIGHNESS

GREGOR, CAZIQUE OF POYAIS,

THIS SKETCH

OF THE

MOSQUITO SHORE,

INCLUDING THE

TERRITORY OF POYAIS,

IS RESPECTFULLY INSCRIBED,

BY

HIS HIGHNESS'S MOST DEVOTED,

AND MOST OBEDIENT HUMBLE SERVANT,

THE AUTHOR.

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PREFACE.

THE Author of the following Sketch of "THE "MOSQUITO SHORE, INCLUDING THE TERRITORY OF 'POYAIS," being impressed with a thorough conviction of the immense benefit which not only the native tribes of Mosquitia, but the neighbouring countries in general, must derive, from the civilization and improvement of one of the fairest portions of the globe, has endeavoured in the following sheets, to attract the attention of enlightened Europeans to the subject, by combining the knowledge of its history, natural productions, the best mode of culture, &c. which he acquired during a portion of his life spent in that part of the world—with the information afforded to him by the few but authentic authors who have written any thing on the subject.

In this undertaking, he has endeavoured, as much as possible, to avoid making any statement which might appear doubtful or exaggerated, especially to such of his readers as are unacquainted with the circumstances that have until now retarded the civilization of this hitherto neglected country; and he has therefore confined himself, as much as possible, to such plain and positive facts, as are establish-

ed beyond the shadow of doubt, by reference to the authorities alluded to,—being aware, that although he may have thereby rendered the publication less entertaining to general readers, those who are likely to be more nearly interested will be better pleased with the plain statement exhibited.

He has endeavoured, under the head of Agriculture, to give a full sketch of the usual mode of management, and probable returns, which may be expected from some of the leading articles of produce; and he hopes the industrious planter or farmer, will find this not the least interesting part of the book.

He may here be permitted to observe, that there seems good reason to believe, that at least a part of the native tribes of Mosquitia, (perhaps the Poyers in particular), were at one period better acquainted than at present with many of the arts of civilization; and some of the customs of the Poyers, and others in the interior, together with the antiquities found in their country, and their hereditary enmity to the Spanish nation, seems clearly to indicate their descent from some of those brave Mexican tribes, who declined submission to the yoke of the destroyers of the unfortunate Montezuma; and although a barbarous policy has retarded their return to, or advancement in civilization, they themselves have repeatedly shewn *an anxious desire* to acquire the arts of Europe, as is manifest by their repeated invitations to the English, to form settle-

ments amongst them, as well as by their former offers to cede a part of their country to Great Britain; thereby shewing that their aversion to Spain does not extend to all the other nations of Europe. Their friendship for the British has indeed been constant and uninterrupted, and their honesty and good disposition, manifested not only by their fidelity to the former English settlers, but also by their kindness to every peaceable person, who for the purposes of trade or otherwise, has occasionally resided amongst them.

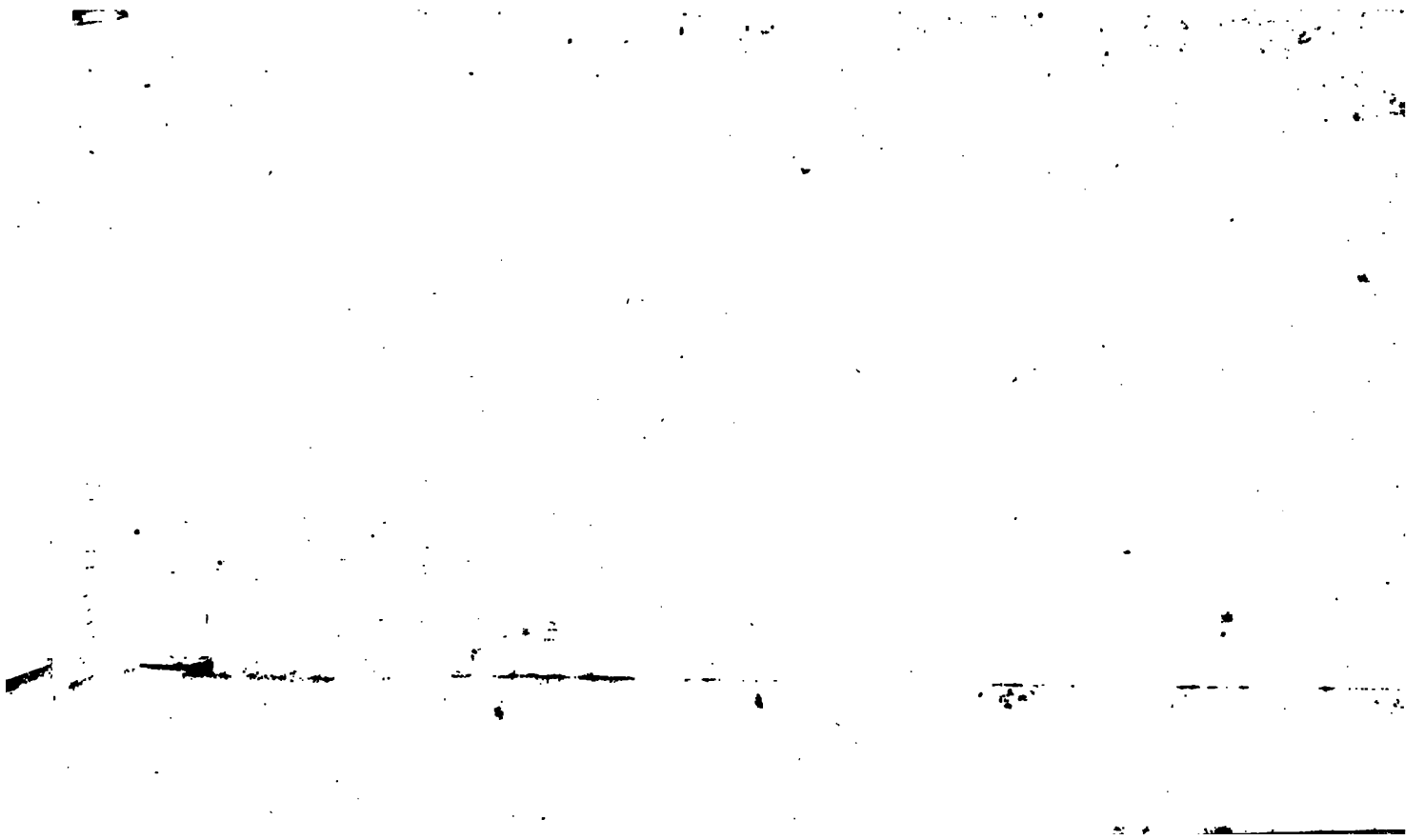
The proclamation, which was addressed to the inhabitants of Poyais, by His Highness the Cazique, on leaving that country, (dated at Rio Seco the 13th of April 1821,) states, that His Highness's present visit to Europe, is for the purpose of procuring religious and moral instructors, the implements of husbandry, and persons to guide and assist in the cultivation of the soil; and it very particularly mentions, that no person but the honest and industrious, shall find an asylum in the Territory. By a strict adherence to these principles, by a firm and equitable administration of justice, to native and settler, without respect of persons, and by strictly guarding against, and discouraging, the introduction of those vicious and immoral habits, which are unhappily too prevalent in the West India Islands, tending to subvert every good and social principle, His Highness will continue to merit the esteem of his faithful

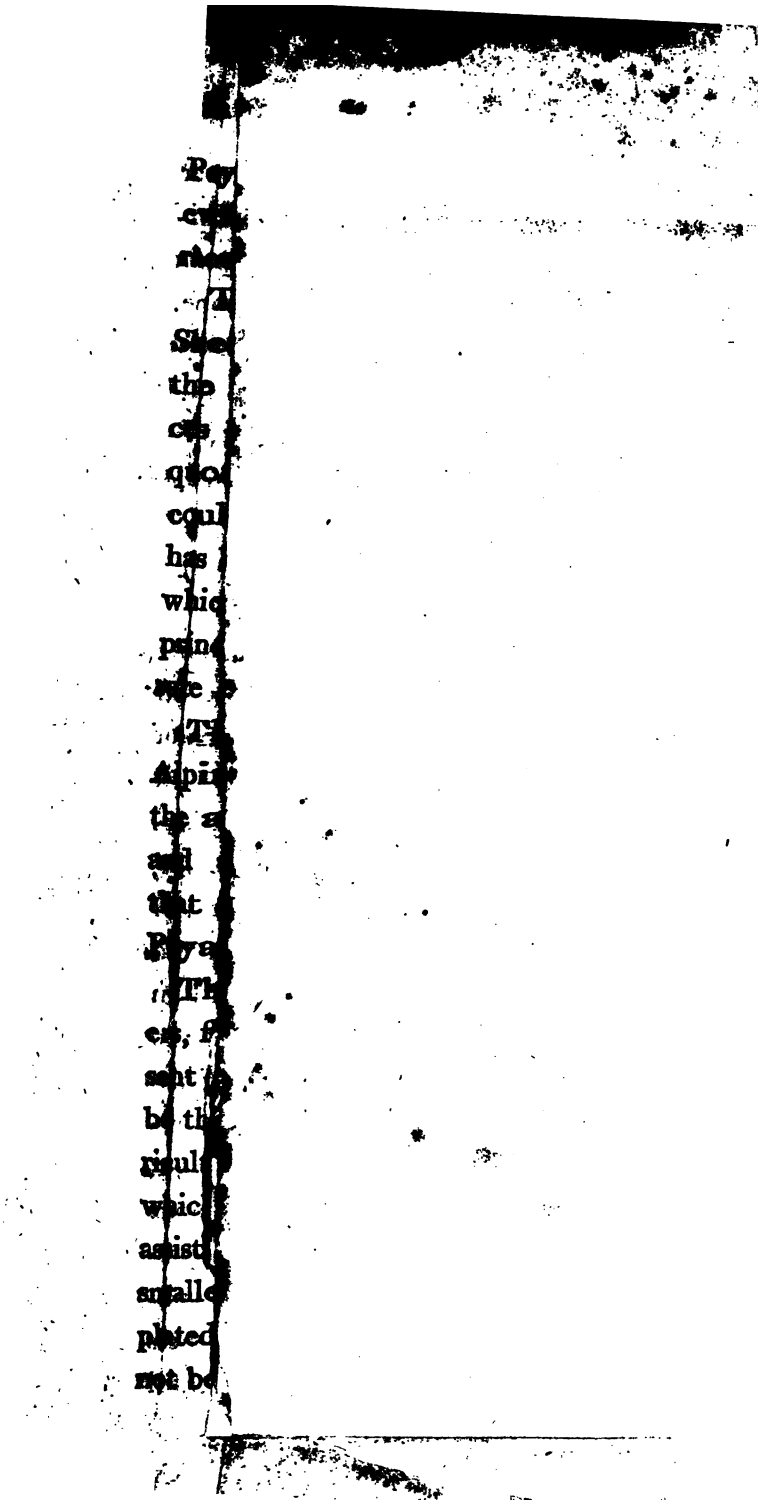
Poyers, establish his power on a sure basis, gratify every friend to the improvement of the human race, and earn to himself immortal honour.

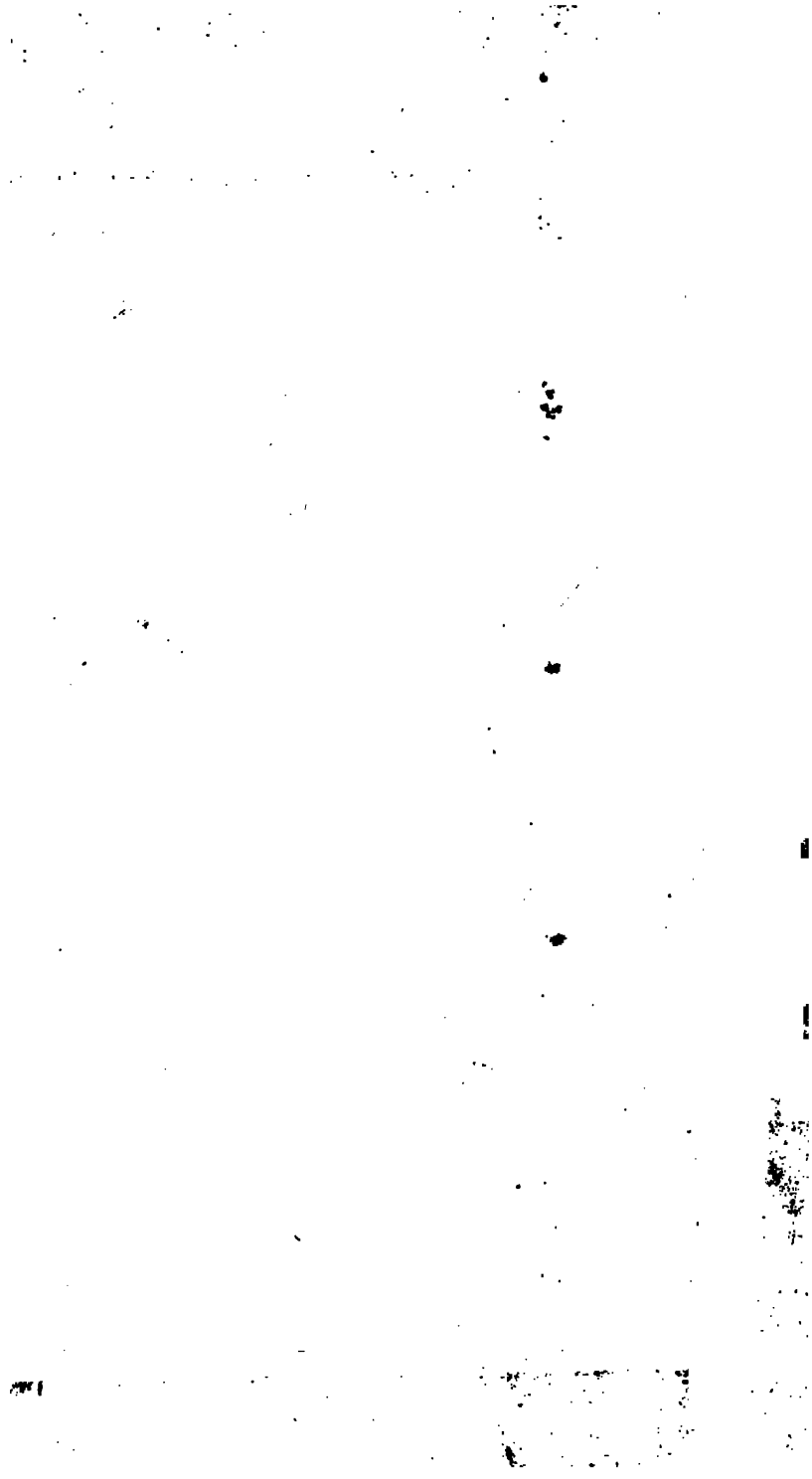
The Author had intended to prefix to the present Sketch of the Mosquito Shore, a short " Memoir of the Macgregor." But the documents and references which he found it necessary to consult and quote, before even a concise view of the subject could be exhibited, were so voluminous, that he has been obliged to reserve this part of the subject, which may perhaps include a brief Sketch of the principal events of His Highness's life, for a separate publication.

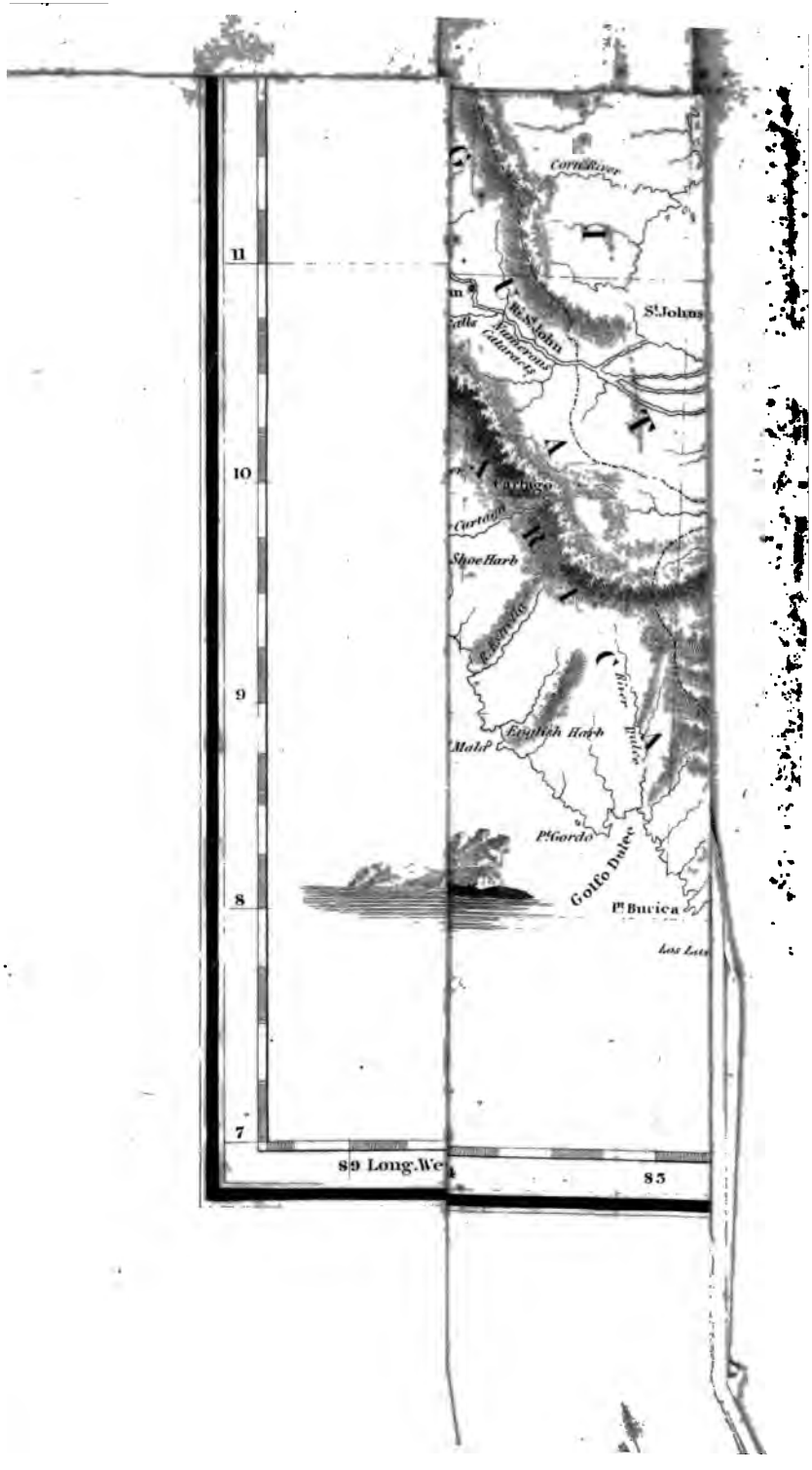
That the chief of this very old clan (the clan Alpin or clan Gregor,) is directly decended from the ancient Kings of Scotland, is generally known and admitted; and the Author ventures to assert, that the right of His Highness Gregor, Cazique of Poyais, to the Chieftainship, cannot be disproved.

The Author hopes for the indulgence of his readers, for many deficiencies and omissions in the present publication; but should this imperfect Sketch be the means of directing the attention of the agriculturists of Europe, to the numerous advantages which may be enjoyed in this fine country,—or of assisting the first settlers, or of forwarding in the smallest degree, the great and good objects contemplated,—he will consider that his exertions have *not been in* vain.





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Rio S. John
Cartago
Curtago
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R. Dolce
River Dulce
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Golfo Dulce
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A SKETCH

OF THE

MOSQUITO SHORE,

INCLUDING THE

TERRITORY OF POYAIS, &c.

NAME.

This country, it is generally supposed, derives its name from a cluster of small islands, or banks, situated near its coasts, and called the *Mosquittos;* some late geographers have designated it by the name of *Mosquitia*, which is certainly a more elegant appellation than that of *Mosquito Shore*, conveying to a stranger ignorant of its derivation, the idea of a country infested with *Moschetos*, which would be a very unjust conclusion, as there are perhaps few countries under the tropics, so little troubled with these disagreeable insects.

EXTENT AND BOUNDARIES.

THE Mosquito Shore extends from the *Point of Castile*, or *Cape Honduras*, being the northern Point of *Truxillo Bay*, to the *River St John's*, called by the Spaniards *San Juan de Nicaragua*, being 182 leagues of shore. A chain of lofty mountains run diagonally from Point Castile to St Juan's, and serve as a strong barrier between the Spanish and Mosquito territories. The area of the latter, which is one-third larger than the kingdom of Portugal, forms an irregular triangle, of which Cape Gracias a Dios, makes the apex*.

It is bounded on the North by the *Sea of Honduras;* on the South by the river of *San Juan;* on the East by the *Carribean Sea*, and *Bay of Guatemala;* and on the West by the Spanish Provinces of *Honduras* and *Nicaragua*. Its greatest length from north to south, may be estimated at 340 miles; and its extreme breadth at 235 miles. At a medium we may venture to give it an area of 70,000 square miles. To this we ought to add the district of *Talamancas*, claimed by the king of the Mosquito nation, containing about 4200 square

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Memoir of the Mosquito Territory, by Captain Wright, N. 1808—p. 11.

miles; and also the territory of *Chiriqui*, which may be estimated at 1800 square miles; these two districts make an addition of 6000 square miles more, which added to the Mosquito Shore *proper*, gives a total of 76,000 square miles, or 48,640,000 English acres.

COASTS, CAPES, BAYS, HARBOURS, LAKES, AND RIVERS.

The coasts are generally flat, and surrounded with reefs; but the interior is so variegated, as to render a successful invasion impracticable, it being protected on all sides by morasses and inaccessible mountains *. Captain Speer describes the country as full of large rivers, that run some hundred miles up into a fine, healthy, and fruitful country; the soil producing every thing that usually grows in North America and the West Indies.

Truxillo Harbour, being the westernmost extreme of the Mosquito shore, is a noble large bay, where are the commodious harbours of *Little*, and *Big Puerto Novo*, and where large vessels may lie in perfect safety †. This bay abounds with fish, game, wood, and water. Truxillo bay is a very safe harbour, and easy of access in bad weather, or

* Columbian Navigator, published by Lawrie and Whittle, 1819.

† Wright's Memoir, p. 16.

in strong northerly winds. Excepting a few rocks which lie round *St Luke's Kay* (or island), at the entrance of the bay, on the south shore, there is no danger in any part of the bay; and it is so capacious, that all the navy of England may safely ride within it. The tide is not perceptible here; the easterly winds prevail during the greater part of the year*. Captain Hester says, water is here in great plenty. In watering, you may either land your casks, and roll them over a narrow neck of land, or you may fill them in your boats, with buckets, &c. out of many rivulets; but the chief place is *Crystal River*, which bears S.E. by S. from the outer part of the bay. Here are to be found turtle, manati, with pecarys, warrys, and many other kinds of wild game in the season; also great plenty of fish. Mahogany and fustic are in abundance. You may load anywhere in safety.

Cape Honduras forms the northern part of the bay of Truxillo, and the westernmost point of the North-Mosquito coast; it is also called *Punta de Castilla*, and *Cabo Delgado* by the Spaniards. In Laurie and Whittle's chart of the West Indies, it is laid down in latitude 16° 1′, and longitude 86° 2′. The late Spanish charts place it in longitude 86° 12′, or 10 minutes more to the west, making the distance from *Cape Camaron* 20, instead of 17 leagues,

* Columbian Navigator, p. 32.

as in Laurie and Whittle's charts. I do not pretend to decide its true longitude, but am rather inclined to think the Spanish correct, as the distance between the two capes is undoubtedly 20 leagues. The point forming the north side of *Truxillo Bay* is low, and a considerable reef of coral rocks, with sand, stretches from it to the westward. The land of the interior, hence to the eastward, appears high and variegated.

Cabbage Tree, or Three Leagues Point Lagoon, lays about twelve miles to the eastward of Cape Honduras; it is of a small extent, but with a very wide mouth, and has a reef of rocks laying off its westernmost entrance.

Salt River Lagoon, lays a few miles inland, a little to the eastward of the former, and has a small river running out of it, which empties itself into the sea; here, it is said, large quantities of salt might be made.

Great Roman River, called by the Spaniards, *El Rio Grande*, empties itself into the sea, after a course of about one hundred and fifty miles, by two mouths, which are formed by *Spark's* island. Several considerable streams empty themselves into it, the chief of which are the *Rio Guayape*, which rises in the mountains in the neighbourhood of *Olancho el Viejo*, where there are mines of silver. The *Rio Yanque*, has its head waters in the immediate vicinity of the silver mines, and in

its course passes by the Spanish towns of *San Gorge de Olancho*, and *Soneguera*, and empties itself into the great Roman river, about thirty miles below the latter town, where the Guayape also forms a junction with it.

Lime-house River, is the next on the coast, and has a course of about forty miles; from the sea it is known by a saddle mountain with a sugar loaf hill on one side, and by another sugar loaf on the other side, whose top appears to be broken off. To the eastward of the mouth of the river are the *Great Rocks*, which shew themselves like a round bluff; they are close to the sea side, about a mile from the shore. The bluff point of the Great Rocks to the eastward, and old Roman point, make *Lime-house Bight*. Further on are the *Little Rocks*, and between them and the Great Rocks are the two rivers called *Piaw River* and *Piaw Creek*. At Piaw River there is anchorage.

Zachary Lyon River follows next, and has a course of about 30 miles; it has high land, right over it, in the form of a sugar loaf, not unlike that over *Black River*, but distinguished by a saddle mountain, a little to the westward; between Piaw river and the Zachary-lyon river, there is a small bay, called the *Turtle Bight*. It is on the banks of the Zachary Lyon, that the proposed Hebrew colony is about to be established. The title-deed

to which property, has already been transmitted to a respectable house in London.

Praunow Creek, is only two miles to the westward of *Cape Camaron River*; the opening is easily seen from the sea, as the eastern side is distinguished by a high sand hill, and on the western side a spit stretches out a mile into the sea. This river forms the eastern boundary of the projected Hebrew colony.

Cape Camaron, and River, are the next important points on the coast. The Cape, as determined by the Spanish observers, lies in 16° 2′ north and 85° 9′ west. The coast between Cape Honduras and Cape Camaron is irregular; there are gradual soundings in approaching, but there are some patches of rocks along shore.

Black River; the entrance of this, which is to the eastward of Cape Camaron, has been determined by the Spanish observers, to be in 15° 58′ North, and 84° 55′ West, or at the distance of about twelve miles from the cape.

The Spaniards call it *Rio Tinto*; it has a course of about one hundred and twenty miles, and several considerable streams empty themselves into it. It is navigable for small craft till within about twenty miles of its principal source. About forty miles from the sea, on its left bank, is situated the town of Poyais, the capital of the *territory* of this name. And about fifty miles higher up is the

Embarcadero, from whence there is an Indian path leading to *Manto,* or *Olancho el Viejo,* in the neighbourhood of which, as already observed, there are rich silver mines. At the junction of two of its branches, and in latitude 15° 8′ at the base of a ridge of mountains, are two remarkable hot and cold springs, situated close to each other. " Its entrance ", the only harbour on all this coast from " Rattan to Cape Gracias a Dios, was for more than " 60 years the refuge of the Logwood-cutters, when " the Spaniards drove them from the forests of East " Yucatan; they waited there in safety for the " moment their enemies should retire. As their " expulsions were frequent, and always unforeseen, " the ships which went to load with logwood in the " bay of Honduras, chose to touch first at the " Black River, to get intelligence, and to deter- " mine in consequence the manner of pursuing " their voyage. Wood-cutters, sailors, deserters, " and adventurers of several kinds, fixed themselves " insensibly in this place; they received merchan- " dise in return for the fruits of their labour, and " soon established a lucrative trade with the Spa- " niards in the inland parts. The last treaty of " peace, which secures to the wood-cutters the un- " interrupted enjoyment of their forests, far from " making the Black River deserted, has given more " activity to the settlement. The sea coast is san- " dy, generally low and swampy, with mangrove

" trees: higher upon the rivers and lagoons, the " soil more fertile, produces many plantains, co- " coa-trees, maize, yams, potatoes, and several " other vegetables; the passion of drinking rum " has made them begin the planting of sugar canes. " The rivers, as well as the lagoons, are extremely " well stored with fish, the forests filled with deer, " pecarys or Mexican swine, and game. On the shores " they catch the finest turtle, from March to June, " and from August to the end of September; be- " sides this fishery, which is very plentiful, the Black " River settlers cut mahogany and zebra wood, and " gather a great deal of sarsaparilla. These settlers, " still fewer in number than those of the Bay of " Honduras, are like them under the inspection of " the commander of the frigate which cruises on the " coast: but the colony is so well situated, that it " cannot fail of increasing; the Government, who " destroyed their fort at the peace, in vain neglects " it. It is one of those plants, which placed by " chance in a happy corner of the garden, flourish, in- " crease, and bear fruit of themselves, without the " gardener's giving himself the trouble of watering " or taking care of them. But it is now given up " to the Spaniards, and the English have entirely " abandoned these parts." * The occupation of this territory by the Spaniards, was however of

* Jeffery's West India Atlas, p. 11.

short duration; for having quarreled with the Mosquito people, the fort at Black River was attacked by the Indians, under the command of one of their most distinguished chiefs, General Robinson, and taken by escalade. The Spaniards however effected a retreat, and since that time have never attempted to make any other establishments.

Black River Lagoon, is of considerable extent, being calculated at eight miles broad and fourteen in length; it is beautifully spotted with several small islets, on one of which, when in possession of the British, was occupied for raising stock.

Plantain River, is about thirty miles to the eastward of Black River; it has a large mouth, with four fathoms water, a short distance from the coast; its sources are about eighty miles in the interior of the country; on its left bank, and near the mouth, are some fine savannahs, where the Indian chief, General Robinson, has a large herd of cattle.

Brewers Lagoon, is fifteen miles farther on; it has a wide mouth, with anchorage off the entrance from twelve to eight fathoms water. This Lagoon is about nine miles broad, and runs nearly fifteen into the interior of the country. In the middle of the haven, about a league up, is an island, that appears like two hills, whereon some English people formerly resided, and probably had a battery, as there are two old guns laying there to this day.

Puttuch, or Patook River, is of considerable

size, and has several smaller rivers that empty themselves into it, the chief of which is the *Rio Barbo*: these streams have their sources in the ridge of mountains, which form a barrier to the left bank of the great river Yare; the extent of the Patook and its tributary streams, is upwards of one hundred miles. It has two mouths, one of which empties itself into Brewers lagoon. On the easternmost bank of the Patook is *Patook Point*, from which a sand bank, with a sharp point, extends for a mile and a half into the sea; and which vessels ought to give a good birth to, approaching no nearer than nine fathoms water. Two or three years ago, in the time of the heavy rains and *freshes*, the waters of the river cleared away the bar, leaving a depth of about three fathoms, which is a proof of the facility, with which the *bar rivers* on the north coast might be cleared and deepened; it has been gradually filling up ever since.

Little Patook River, is about fifteen miles further to the east of Great Patook River, and rises about thirty five miles in the interior. There is a kay, or small island, laying between the two rivers.

Caractasco Lagoon, called by the Spaniards *Bahia de Cartago*, lies about 17 leagues from Great Patook river. This place is easily known; for, as the mouth is very wide, the opening may always be seen

It is shallow, has a bar, and is only navigable for small vessels, and is considered by the natives a day's journey in length; its breadth, which is nearly equal throughout, may be computed at ten miles,

Captain Henderson, who visited this lagoon in the month of September 1804, says, "We passed the bar in a short time, and entered the "Lagoon of Caratasco, and had to beat up the remainder of our voyage, a distance of about two "leagues, in a course directly contrary to the one "we had pursued previous to entering it. It was "almost the same as going back by the same sea, "the space of land dividing the navigation we had "left from that we were in, not being more than "a few hundred yards. We came to an anchor off "the settlement of Crata at five. The Mosquito "Indians have other settlements on both sides of "the sound.....Caratasca Lagoon is considered by "the natives a day's journey in length: its breadth, "which is nearly equal throughout, may be computed at about ten miles; it is shallow, and only "navigable for vessels of small burden. On landing, "I was immediately received by Captain Potts, a "man of some consequence in the settlement of "Crata, with most expressive marks of friendship "and regard, and conducted by him to his habitation. The whole of the inhabitants of the "Settlement soon crowded round me, and from all "I could discover the same signs of welcome. An "excellent supper of fowls, eggs, plantains, and "the root of the Casava, was expeditiously prepared, and I do not recollect that I ever made "a meal with more entire enjoyment. I passed the

" night with my Indian friends. Captain Potts " appeared about sixty years of age, and a more " kind, amiable being I never met. His atten- " tions and hospitality were unceasing. He had " three wives; the elder seemed of the same years " with himself; the youngest certainly not more " than sixteen; the other might be taken at the " medium age of both.

" Saturday, 5th.—As soon as I had breakfasted, " I was informed that a house had been prepared for " me to occupy during my stay. Few houses, I be- " lieve, had ever been raised with more expedition. " It was begun and finished in one night; and al- " though not after any known design of architecture, " it was comfortable and commodious, sufficiently " proof against the weather, and affording every " requisite convenience for myself and servants. Of " the latter I never stood in less need, for the " unremitted assiduity of the people of the country " to be useful to me, would scarcely allow of their " interference in any thing. In the course of the " day, numbers that I had not seen on my arrival, " living contiguous to Crata, came and paid their " respects, bringing presents of hogs, poultry, &c. " &c. I invited three of the principal men to dine " with me. After our meal was concluded, I gave " several toasts expressive of regard for their na- " tion, and for perpetuating a good understanding " between it and my own; all of which they per-

" fectly understood, and received with high marks of
" approbation.

" Sunday, 6th.—The principal Mosquito chiefs
" not arriving as I expected, in the forenoon I dis-
" patched other messengers to hasten them. Dur-
" ing the remainder of the day, I amused myself
" with short rambles round the settlements of Crata,
" and was much delighted with the simple and rural
" appearance of the Indian dwellings, and the very
" pleasing scenery which every where presented
" itself. I eagerly wished for the tasteful pencil
" of a Gilpin to delineate some of the many agree-
" able subjects before me; for, without the language
" of affectation, most of them were worthy of it.

" Wednesday, 9th.—As it might be expected, my
" appointment of yesterday produced an early as-
" semblage of the men of Caratasca Sound this
" forenoon. Immediately after their arrival, I con-
" cluded my business with them.... An ox having
" been slaughtered for the occasion, I had as many
" as my house could contain to dine with me, and
" every thing passed with entire harmony. I can-
" not omit remarking, that the greater part of my
" guests, if not tastefully or fashionably dressed,
" were at least splendidly and variously so. I really
" believe the entire costume of Europe, civil and
" military, for the last hundred years, might at one
" view have presented itself at my table. And
" whatever was once thought gay and ornamental in

" the brilliant and refined circles of London and " Versailles, might perhaps be now considered equally " so on the less polished shore of Caratasca. It had often " been matter of surprise with me, to what earthly " mart the venders of cast off gaieties in London could " consign the odd articles frequently decorating their " doors; this astonishment ceased, the moment my " company had collected in the Mosquito nation.

" Monday, 14th.—Early this morning General " Robinson came on board our vessel, and shortly " afterwards I accompanied him on shore. Whilst " the matters I had to take with me were collecting, " I amused myself with a walk of about a mile " through a spacious savannah, and the scenery on " this side the Lagoon certainly greatly surpassed that " we had left on the other. This savannah for a very " considerable extent, formed an entire level of con- " tinued verdure, and of the finest pasturage; skirted " on one side of the water of the Lagoon, and bounded " on the other by gentle rising hills. The clumps " of pine and other lofty trees, interspersed at pleas- " ing distances over the whole, gave the view all " the appearance of cultivated art, and afforded a " most agreeable relief to the eye. At the foot of " the hills, the wood in places thickening, almost " deluded the imagination to conceive, that in the " bosom of these sequestered groves might be found " the ornamental dwelling of some tasteful owner.

"But awaking from this, here all was Nature *."

I must now leave the friendly Indians, and continue the description of the coast, which from Caratasca Lagoon, inclines to the south-east.

Croak or Crotch River, is a small stream, which empties itself into a little bay, a short distance before reaching the False Cape. It has from nine to eleven feet water over its bar.

False Cape, is about 14 leagues from the entrance of Caratasca Lagoon; it has a shoal called *Cape Bank* laying off it, that lies to the northward. There is tolerable anchorage under the lee of the cape, after getting round the sand bank.

Little Black River, lays about half way between the False Cape, and Cape Gracias a Dios; its course is about forty miles, and about twelve miles from its mouth, is the settlement of *Tobuncana*.

Cape Gracias a Dios, this celebrated cape lays in about 15° north latitude. The harbour is formed by an arm of the sea, large enough to hold the navy of Great Britain, and open only from E. by S. to S.S.W. from which points the wind seldom blows there †. Captain Wright informs us, that it is a noble extensive harbour, where Commodore Parry anchored in 1782, with his squadron, consisting

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* An Account of the British Settlement of Honduras, &c. by Captain Henderson, 44th Regiment, 1811, p. 173.

† Edward's Account of the British Settlements on the Mosquito Shore, in Vol. 5, app. p. 209.

of a fifty gun ship, and some heavy frigates; this bay is open to no winds but a south-east; the Cape Keys, off this place, abound with turtle all the year round *. The depths in the bay are from 6 to 2½ fathoms, and this is a safe and convenient place of shelter during the north winds. When off the pitch of the Main Cape, you will see the land tending nearly north and south. The cape ends in a low sandy point, tending to the southward: some old trees are frequently drifting out of the river. The water shoalens a good way off, till you double the pitch of it, then you may borrow as close as you please, into 2, 3, 4, and 5 fathoms, soft ground. Do not proceed higher up in the bay than in 3 or 4 fathoms; although it is all clear ground, and sheltered from all winds †.

On entering the Bay, a small village presents itself on the larboard side; here the King of the Mosquito Nation usually resides; there are also some settlers here, and an American and an Irish Gentleman, have both established a store for the sale of goods, which are chiefly obtained from Jamaica. "It is one of the most healthy and beautiful "spots in the world: the Europeans do not suffer "by any of those disorders so dangerous in the West

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* Wright's Memoir of the Mosquito Territory, p. 17.
† Columbian Navigator, *art.* Mosquitia, p. 32.

" Indies, and live here to a very old age. *" Before the evacuation of it by the British in 1787, there were near thirty English families, with about one hundred negro slaves, who had begun plantations of sugar on the lands given them by the Mosquitos †. The inhabitants live on the edge of a very large savannah, perpetually covered with the most fattening pasturage, and bounding on the river Wanks.

Wanks, or *Great Cape River*, called also *Vankes*, *Yare*, *Yowra*, and *Golden River*, from the grains of that metal being found in its sands: it arises very near the South Sea, and after successively passing the Spaniards, Indians friendly to the Spaniards, Indians friendly to us, and Mosquito Indians, rolls over a shallow bar into the sea at Cape Gracias a Dios ‡. In the time of the English, they cut a canal from the bay through to the river, from which it is separated only a few hundred yards; it is now filling up, but canoes are still able to pass, and orders have lately been given to have it properly cleared.

The strength of current, and various course of this river, and many other obstructions to measurement of distance, make it very difficult to ascertain the breadth of the continent; but mules

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* Introduction to Jeffrey's West India Atlas, p. 11. † Ibid.

‡ Edward's account of the British settlements on the Mosquito shore, p. 209.

have been brought down to the Cape, from a place supposed to be considerably more than a hundred leagues up the river, from whence it is said to be only two days ride through the woods to the Spanish city of Leon *. The whole length of the river may be safely stated at upwards of 300 miles.

In the months of February and March 1688, a party of the Buccaniers, who had been cruizing in the South Sea, passed from the Bay of *Amalapa* to the town of *New Segovia*, and from thence, after traversing the woods for a short distance, they embarked upon the river and arrived at Cape Gracias a Dios. The town of New Segovia "lies in a bot-" tom, and is so surrounded with mountains, that she " looks as if she were laid up in a prison; the churches " here are but very indifferently built, and the place " of arms is both very considerable and very fine; " it is an inland place, forty leagues off from the " South Sea. The way that leads to it, from the place " where we were, is very difficult, being all moun-" tains of a prodigious height, to the tops whereof " we must creep with great danger; and the val-" leys, consequently, are so very narrow here, that " for a league of even ground you pass over, you " have six leagues of mountains to go. When we " had passed these mountains, we felt a very sharp

* Edward's account of the British Settlements on the Mosquito shore, p. 209.

" cold, and were taken with so thick a fog, that even " when day appeared, we could not know one ano- " ther, no otherwise than by our voices; but that " only lasted till ten in the morning, when the " weather cleared up, and the fog went entirely off; " and the heat which succeeds the cold, becomes " there very great, as well as in the plains, where " none of this cold is felt, till you come to the foot " of the mountains.—On the 16th, we lay at another " (Hatto *) six leagues farther; and at last on the " 17th, which was the sixteenth day since our setting " out, we came to the so much desired river, and " presently entered into the woods, that grow upon " the banks thereof, where every one fell to work, " in good earnest, to cut down trees to build pipe- " ries, wherein we might go down the same †."

Upon their first setting out, they found the river to run for a " long way in a most rapid man- " ner, interrupted by vast numbers of rocks, of a " prodigious bigness. On the 20th of February," our author says, " we found the river larger, and " more spacious than before, and met with no " more falls therein; but the same was so incum- " bered with trees and bamboos, which the flood " carried thither, that our wretched machines could " not be kept from overturning; at last, when we

* A Grazing Farm.

† Hist. of the Buccaniers of America, p. 170, London 1699.

" were got down some leagues farther, we found the " river very good, the stream very gentle, and no " likelihood of our meeting any more rocks nor " trees, though we had still above sixty leagues to " the sea side. Though this river we are now leav- " ing, is by some Spanish maps made to run direct- " ly fourscore leagues, and then to fall into the " North Sea, yet we have computed the same to " run above three hundred, being almost always " carried to the south-east for to go to the north *."

The *Yare*, or upper part of the river, as we have seen above, is full of falls, and there is a considerable one, and the last, just below the *forks*, in about latitude 14° 20′ N. and about fifty miles above the Indian town, called Secklong, which latter is by the course of the river distant about 150 miles from the mouth of Cape River, thus making the river navigable for small craft for about 200 miles; the direct distance from the great falls, by land, to the *Upper Embarcadero* on the Black River, is about 70 miles, but a branch of the river Yare rises within nine miles of Popyas River, which falls into the Rio Tinto, separated however by a ridge of hills, but of no considerable height.

Warner's Sound, called also *Wano Sound*, is a short distance to the southward of the Cape, is of small extent, and has a bar at its mouth.

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* Hist. of the Buccaniers of America, London, 1699.

Santipoco River, is a few miles further, and runs out of a small lagoon.

Sandy Bay, is nearly 10 leagues from Cape Gracias a Diot. You may come to an anchor in this bay in as deep or as little water as you choose. In 6 or 7 fathoms there is good muddy ground, and fit for ships. In from 5 fathoms, or less, is sandy ground, fit for smaller vessels. At the head of the bay, and about twenty five miles from its entrance, is the chief Indian town, and where the King frequently resides; this town is situated upon the river *Coree*, which runs for about ninety miles up into the country. The English formerly had settlements between this bay and Ducana lagoon.

Governor's Point, forms the southern point of the outlet from Ducana lagoon, and here commence the territories of the Indian Chief, styled the GOVERNOR.

Stony Island, lays nearly opposite to the above, a little to the southward, and distant from the main land about twelve miles; it is a rock, and appears above water to the height of a ship's hull, and quite black. It lies E. S. E. from Sandy Bay, at the distance of about 4 or 5 leagues. You may approach to the distance of a mile from Stony Island, and have 6 fathoms, bottom of white sand.

Housetana Creek, is about nine miles to the southward of Governor's Point, and about thirteen miles further south, is *Housetana River*, which

flows out of *Para Lagoon*. The coast from Governor's Point to the northern entrance of this river, is called *Playa Blanca*.

Waniessa, called by the English Devils Key, lays at the distance of about three leagues south from Stone Island, and fourteen miles from the main land. It is a small islet covered with trees.

Brangman's Bluff, called by the Spaniards *Monte Gordo*, is composed of the highest sandy hills on the coast to the southward of Cape Gracias a Dios. It has three or four whitish hills, which are very remarkable, and is also covered with tall trees. There is anchorage close in shore, under the high land.

Ville Coose River, rises upwards of one hundred and fifty miles in the interior, and empties itself by two mouths, the northernmost into *Para Lagoon*, and the southernmost by what is called the *River Vava* into Wava Lagoon. The *Towkcas Nation* live on its head waters.

Wava Lagoon, lies a little to the southward of Brangman's Bluff; its mouth is of no great extent, and is situated a few miles inland, communicating with the sea by means of two rivers, one of which is of the same name.

Tongulaw Lagoon, is about fourteen miles to the southward of *Wava River*, it is also of small extent, an island lays inside of it, near its mouth; the *Fox's Reef*, lays at the distance of three miles,

and across the whole lengths of its mouth, and between the reef and the southernmost entrance of the lagoon, there is anchorage in 3 fathoms.

Prince Pulko River, is of considerable extent, and empties itself into the sea by four principal mouths, which form several islands; the northernmost is called *Walpo Six*, and its southernmost branch is called *Great Snook Creek.*

Little Snook Creek, is a small river, and dividing itself into two branches, forms a considerable island at its mouth.

Great River, called in some maps and charts, *Rio Grande*, rises about 180 miles in the interior, and in its course several small streams fall into it; this river empties itself into the sea, a few miles below Little Snook Creek; which with it, forms at its mouth, a considerable island; it has a considerable depth of water at its mouth, and there are several Indian settlements on its banks.

Alligator Creek, is a small arm of the sea, and runs about twelve miles up into the country, ending in a salt pond, or lagoon. From hence to Pearl Key Lagoon, a great number of islets and shoals lay all along the coast, which makes the navigation intricate for a stranger, and a pilot ought to be procured, before attempting it. The principal of these are the *Moskito Keys, King's Keys, Long Reef, Ashin's Key, Pearl Keys, Water Keys, Hobbie's*

Keys, Frenchman's, Bill Birds Keys, Parrot's Key, Maroond's Key, &c.

Pearl Key Lagoon, the entrance lies in about 12° N. and has a bar, with only nine feet water on it. It is distant about fifteen leagues from Cape Gracias a Dios. Captain Wright says, it has some small keys all round and lying off it, which forms good anchorage *. It takes its name on account of the pearl oysters which are plenty about it †. This lake is of considerable magnitude, being from two to three miles broad at its entrance, about twenty miles in length, and from eight to eleven miles in breadth. It contains five islands, some of them two miles in length. There are four rivers of some magnitude that empty themselves into it. The entrance, however, has a shallow bar, but there is good anchorage under the lee of the north point in three fathoms water. In the time of the English, there were a great many settlers at this place, attracted by the fertility of the soil; there are still a few here, who cultivate principally cotton and sugar; one of them, a French gentleman, has a considerable sugar plantation, and has lately commenced the distillation of rum.

Bluefield's Lagoon, is said to be called after a famous Jamaica buccanier of that name, it is some-

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* Wright's Memoir, p. 17.

† Introduction to the West India Atlas, p. 11.

times also denominated *Hone Sound*. This Lagoon, properly speaking, is composed of an *Upper* and *Lower*, and is separated in one part from Pearl Key Lagoon by a narrow isthmus of two miles in breadth. An island, called *Hone Key*, and about eight miles long, divides the mouth into two entrances; the southernmost entrance has a bad bar and very shallow, but the northernmost has sixteen feet water over it at high water; when inside, it forms a noble bason, capable of holding a thousand sail of shipping *. The Bluff, an extensive rocky eminence, of very easy defence, has naturally almost every requisite for a town, and presents so bold a bank to the harbour, that vessels of any burden may lie close to it when they load †. This high eminence has a flat at top of about 1500 acres, on which one cannot land but by two places easy to guard; it is joined to the continent on the north part by a low isthmus, sandy on the sides, and fenny, with mangrove trees in the middle. There is the most grand and extensive prospect of the sea and land to the south from the top of this eminence ‡. As *Bluefields Bluff* fully commands the entrance of the harbour, a small force stationed there, would keep off, effectually, a great and nu-

* Wright's Memoir, p. 17.

† Edward's Account of the British Settlements on the Mosquito Shore. App. vol. 5th, p. 209.

‡ Introd. to Jeffery's West India Atlas, p. 11.

merous enemy *. It would be easy to fortify this Bluff, for stone is found near it in abundance, and the oyster shells would afford all the lime necessary †. The *Lower Lagoon* is about 20 miles in length, and from 5 to 6 in breadth. The *Upper Lagoon* is a continuation of the *Lower*, and runs about N. N. E. at its entrance; it is little more than one mile broad, but encreases as you ascend, and in one place is $6\frac{1}{2}$ miles broad; its length may be estimated at twenty three miles. "Several noble rivers, after "having watered some of the richest land, perhaps, "in the world, empty themselves in the vast lagoon "of which this harbour is part ‡." The depth of water in the harbour is from three fathom to three fathoms and a half. The neighbouring land is fertile, and its climate very healthy; the banks of its principal river are covered with cedars, large mahogany trees, and plenty of other trees good for building either houses or ships §. In the time of the English, they had many settlements about the Lagoon, and carried on an extensive trade with the interior of the country.

Bluefields River, called by the Spaniards *Rio Escondido*, and *Rio de Neuva Segovia*, rises in the

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* Wright's Memoir, p. 19.

† Introd. to West India Atlas, p. 11.

‡ Edward's Account of the British Settlements on the Mosquito Shore. App. vol. 5th, p. 209.

§ Introd. to West India Atlas, p. 11.

mountains of the Province of *Nicaragua*, one of its sources being near the town of *Corpus Christi*, and its other principal source rises in the mountains near the town of *Neuva Segovia*, by which it passes; it has a course of upwards of three hundred miles, and in its passage receives the waters of several tributary rivers, emptying itself into Bluefields *Upper Lagoon*; it is navigable for vessels of one hundred tons burthen for 60 miles, and canoes and other small craft may ascend it, nearly to its sources. The *Cockoracks* Indians reside about one hundred and thirty miles from its mouth; they are denominated wild and tame, in order to distinguish the civilized from the uncivilized *; a tribe of the latter, together with the *Woolvas*, have settlements within 15 miles of its mouth.

Monkey Point, lies about ten miles to the southward of Bluefields Lagoon.

Varin Key River; the principal mouth of this river is about eleven miles south of Monkey Point; it has another mouth which empties itself into Bluefields Lagoon. The course of this river is about forty-five miles. *Varin Key*, lays a short distance off it; and between Monkey Point and its mouth, at the distance of eight miles from the continent, is *French Key*, a small round islet.

Rio de Punta Gorda, has a course of about seventy miles, and passing between two ridges of moun-

* Wright's Memoir, p. 25.

tains empties itself into the sea, to the northward of *Punta Gorda*; it has three islands laying off it, called the *Three Brothers*: the tribe called the *Ramas*, have two settlements upon this river, near its mouth, the uppermost of which is called *Tiguzigalpas*.

Grindstone Bay, lays between Punta Gorda, and *Corn River*; there is anchorage for vessels here in from 4 to 10 fathoms water; a short way in the interior, the country rises into high and elevated hills.

Corn River, has a course of only about forty or fifty miles, its sources are at the foot of the high lands of the interior, and its mouth, which is wide, is easily distinguished.

Indian River, has a course of about fifty miles, and rises in a high ridge of mountains in the interior; it communicates with the river *San Juan* by two branches, the one called the river *Cambitto*, and the other the *Rio Bocades*; a few miles further south is the river *Trigo* or *Trigu*, which also runs out of the great river San Juan's. The Ramas occupy the country, from Bluefields to San Juan's, and at various periods of the year, carry on a considerable traffic with the Spaniards.

Rio de San Juan, is considered by geographers as the southern extremity of the Mosquito Shore; nevertheless, the king of the Mosquito nation, whose country it originally was, claims all the eastern part of the province of Nicaragua, as far as *Rio de Oro*,

in the province of Veragua. The river issues out of a lake of the same name, and falls by three mouths or channels into the sea or bay of Guatimala. Its current is so strong, that the flat-bottomed boats and canoes, which navigate it, are about nine days in ascending, and but thirty-six hours in descending, to and from the lake *. This river is more than thirty-six leagues long. Several rapids render its navigation difficult, and the Indians are the only ones who know how to get over these obstacles †. Bryan Edwards, the elegant historian of the British West Indies, however says, "I have been assured, if I am not greatly deceived in my recollection, that a vessel of thirty tons has sailed up to the entrance of this lake, which very vessel afterwards made a voyage to Jamaica. ‡" About the latter end of the dry season, or middle of March, the river is so full of shoals as to render the passage very difficult §; and the entrance into the river from the harbour of St John's, is somewhat obstructed by a bar, on which there are only five feet water. About sixteen years ago, an enterprising Englishman, who casually visited the river, examined the different passages over the bar, and discovered one, which al-

* Columbian Navigator, p. 22.

† Introduction to Jeffrey's West India Atlas, p. 11.

‡ Edward's Account of the British Settlements on the Mosquito Shore, Vol. 5. p. 213.

§ Columbian Navigator, p. 22.

though narrow, would admit a vessel drawing *twenty-five* feet *. The harbour above-mentioned, called St John's, is very capable of containing from ten to fifteen ships of war, with shallow water births, of about three fathoms; and there is room enough for one hundred sail of transports besides, which will be perfectly secure from the north and south winds, the only dangerous winds on the coast †.

The *Lake of Nicaragua*, from which the river flows, is about 170 British miles in length, and about half that breadth. This grand lake is situated in the province of the same name, and according to Alcedo is navigable for ships of the line. "In the "hands of an enterprising people, this lake would "supply the long wished for passage from the At- "lantic into the Pacific, and in the most direct "course that could be desired. Nature has al- "ready supplied half the means, and it is probable "that a complete passage might have been opened, "at half the expence wasted in fruitless expeditions "to discover such a passage by the north-west or the "north-east ‡." At the western extremity of the great lagoon, is a river which communicates with the

* Memoirs of the Mexican Revolution, &c. to which are annexed some observations on the practicability of opening a commerce between the Pacific and Atlantic Oceans, &c. by William Davis Robinson. Vol. 2d, p. 276.

† Edward's Account, c. Vol. 5th, Appendix, p. 213.

‡ Pinkerton's Geography, 4to. Vol. 2d, p. 357.

Lake of Lindavi, or Leon, distant about eight leagues. The distance from the Lake of Leon to the ocean is about thirteen miles; and from Nicaragua to the Gulf of *Papagayo* in the Pacific Ocean, is twenty-one miles *. "The ground between the "two lakes and the sea is a dead level †."

Pinkerton says, "On the other side the space to "be cut, according to the best and most recent "maps, would not exceed ten or twelve English "miles, and might cost to open a grand navigation, "about two hundred thousand pounds sterling ‡."

I have been the more particular in mentioning this idea of a canal between the two seas, as the Mosquitos, whose country it originally was, enjoy still all the eastern part; and the province of Nicaragua, with the exception of the castle of *Nuestra Senora*, on the river San Juan, is inhabited by the Spaniards, only towards the South Sea §, and in the immediate vicinity of the great lake.

Rio Colorado, rises in the mountains of the interior, and in its course to the sea, which is about forty-five miles, several small streams empty themselves into it. This river, according to the Spaniards, forms the boundary line between the provinces of

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* Robinson's Memoirs of the Mexican Revolution, vol. 2d, p. 278.

† Ibid.

‡ Pinkerton's Geography, vol. 2d, p. 358.

§ Introduction to the West India Atlas, p. 11.

Nicaragua and *Costa Rica*. To the southward of this is an inlet called the *Boca de la Tortuga*, into which a small river of the same name discharges itself.

Rio de los Anzuelos, and *Rio Vasquez*, are two small rivers both laying to the southward of Boca de la Tortuga.

Port of Cartago, is at the mouth of the *Rio Matina*, which the Buccaniers have named *Carpenters River*; it is one of the grand rendezvous of the European contraband traders *. This river has a course of about sixty miles, and about thirty-five miles from its mouth, it is joined by another at a place where the Spaniards have a fort called *Castillo de Austria*; there is a road from thence for about eight leagues to the *Embarcadero*, or landing place, which is only seven or eight miles distant from the port.

From Carpenters River to *Punta Chica*, or *Monkey Point*, the coast is inhabited by the race of Indians called *Talamancas*. The following are the capes or headlands, and also the rivers that run through this territory, emptying themselves into the sea, or *Bay of Guatemala*, as it is by some geographers designated *Rio* † *de Suerre*, the harbour, called *el Portete*, *Rio Salado*, port of *Cuernavaca*, *Rio San Antonio*, *Punta Blanca*, *Rio de Bananas*, *Rio de*

* Introduction to the West India Atlas, p. 12.

† The Spanish name for River.

Dios, Rio de los Doraces, Punta Caneta, Rio Quemado, and *Rio de Culebras;* this latter is esteemed by the Spaniards the boundary between the provinces of *Costa Rica* and *Veragua.*

Punta Chica, or *Monkey Point,* is the first headland in the province of Veragua, and after that follows *Punta Gorda de Tirbi.*

Lagoon of *Chiriqui,* and *Bahia del Almirante,* is an immense piece of water; it has excellent anchorage: several islands extend themselves across its mouth from *Punta Gorda de Tirbi,* to *Punta de Valencia,* vulgarly called *Valenty Point.* The *Boca del Toro,* is one of the principal entrances to the Lagoon of Chiriqui. It is 44 leagues from Porto Bello, and leads on the west to the Bahia del Almirante, or Port of Boca Toro; and on the east, or rather south, to Chiriqui Lagoon. The mouth to the west is called *Boca del Drago,* or Dragons mouth. In the harbour there is safe anchorage and good shelter for ships; and under the little islands in the vicinity, smaller vessels may ride securely during violent winds. This place was often resorted to by the Buccaniers, and here they victualled and refitted their fleet, consisting of nine vessels, for a South Sea expedition *.

Bryan Edwards says, " but the finest harbour in all the continent, from Honduras to Porto Bello,

* Columbian Navigator. p. 21.

" is undoubtedly the *Boca del Toro,* a place not " only capable of containing the whole navy of " Great Britain, with good anchorage throughout, " but which has within it many excellent harbours, " sheltered from the wind at every point of the com- " pass; it commands a tract of country one hundred " miles in extent, and joins a lagoon, called the " Chiriqui Lagoon. The rivers that empty them- " selves into the lagoon are indeed little known to any " people, except our Mosquito Indians, who say they " have traced some of them quite back to the Spa- " nish settlements. They aver, that there is a la- " goon on the South Sea coast, right opposite to the " Chiriqui lagoon, and that these lagoons have a " communication with each other, by means of some " of the rivers above-mentioned: certain it is, that " from a hill on the interior banks of the Chiriqui " Lagoon, there is a spacious prospect of both seas. " The navigation into the harbour we are now speak- " ing of, will be attended with no kind of difficulty " to ships of the largest tonnage, the smallest depth " being five fathoms *". Mr Jefferys says, " The In- " dians who inhabit the country around these " bays are very fierce; and, as the Spaniards could " never conquer them, they called them *Indios* " *Bravos*, or Wild Indians. These people have

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* Edward's Account of the British Settlements on the Mosquito Shore. Vol. 5th, p. 215.

" often shewn an inclination to trade with the En-
" glish; but the Mosquitos, (to the northward,)
" being jealous, it has been thought more prudent
" to decline it, though a settlement erected here,
" with a fort, might be attended with a very lucra-
" tive trade to the British nation. Near this coast
" is found a small shell fish, which affords the true
" Tyrian dye. The country is very fruitful, and
" produces great plenty of mango, equal to that of
" the East Indies, with several sorts of spices, includ-
" ing the wild nutmeg, many of which were
" brought by the French, who once had a design of
" settling here *." There are at present about sixty persons, chiefly English from Jamaica, settled here, and the Indians of the whole of the district of Chiriqui, recognise George Frederic, king of the Mosquito nation, as their sovereign, and pay him an annual tribute.

There is a kay on the north point of the Boca del Toro, with cocoa nut trees on it; which shews itself like a snow under sail. When you get this kay in sight, bearing from S. by E. to S. S.W. you must haul off; for there is very foul ground, which lays for at least 3 leagues from the kay †.

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* Jefferys.

† The West India Pilot, p. 86.

ISLANDS.

Ruatan, vulgarly called *Rattan*, is about thirty miles in length, and varies from five, to seven, and eight miles in breadth; it lies nearly E. and W. and the east end of it bears N.W. by W. distance 14 leagues from Cape Honduras, and 11 from Truxillo, and lays 444 miles W. S.W. from Jamaica. It is estimated to contain about 250,000 acres; the climate is very healthy, the land in the vallies rich and fertile. Here are great quantities of cocoa nuts, wild figs, and excellent grapes *. The forests produce white oaks, and pine trees fit for masts for merchant ships †. It abounds with deer, wild hogs, Indian rabbits, and birds of many species; parrots are innumerable, and their incessant noise may be heard at a considerable distance from the shore ‡. Its soil, and the natural advantages connected with it, might perhaps in no degree be found inferior to many of the West India islands which are cultivated, and it is considerably larger than many of them §. A constant breeze from the E. cools and tempers the air, and it abounds

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* Jeffery's West India Atlas, p. 17.
† Maltham's Naval Gazetteer, Vol. 2d.
‡ Henderson's Honduras, p. 163.
§ Ibid. p. 168.

with excellent water *. At its west end are several fine meadows of many hundred acres, where the Jamaica planters formerly used to breed mules.

The north coast is defended by a continued reef of rocks, between which are very few passages even for small vessels. The south side of Ruatan has several good harbours: the principal, named by the English *New Port Royal*, and where they began their settlement, "is a very fine harbour, and ca-"pable of being made impregnable; the sea breeze, "meeting no obstruction, blows quite through, and "renders the place extremely healthy; the air is "cooler, and more temperate than most parts of the "West Indies †."

This harbour is naturally guarded by rocks and shoals, and has an entrance so small as only to admit one ship at a time ‡. It is formed, on the south, by several islets and shoals, which form two entrances. The largest of these is called *George's Isle*; and the best channel is at the west end of it. At the N.E. end of the harbour there is a small kay, called *Careening Kay*, where vessels may be cleaned and repaired. This is the best anchorage for vessels that come in to stay for any considerable time §.

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* Maltham's Naval Gazetteer. Vol. 2d.

† West India Pilot, 1766.

‡ Jeffery's West India Atlas, p. 17.

§ Columbian Navigator, p. 38.

" In *Port Royal Harbour*, British ships formerly " obtained wood; and they procured water from " a rivulet in the N.W. part of the harbour. The " harbour is capacious enough to contain 20 or 25 " sail of the line. Formerly there were two small " batteries here; one on the west end of George's " Isle, and the other on a high point of land on the " S.W. part of the harbour. The heights of Rua- " tan command such an extensive prospect, that no " vessels can pass to the Bay of Honduras without " being seen from them *."

Within about three leagues of the west end of the island, and just to leeward of the second point on the coast, in running down from Port Royal, is a harbour called *Dixon's Cove*, very convenient in north winds for ships to shelter in that are bound to the Bay of Honduras. The banks on both sides of the harbour are very steep, 12 to 3 fathoms not half a ship's length from the deep water to the shoalest. It is best to anchor in the middle of the harbour in about 15 or 16 fathoms, clay ground, and moor with a kedge to the eastward; you will then be abreast of a creek on the east side of the harbour †. This is a fine outlet, as you may be at sea in 10 minutes; and, in case of accidents, a vessel may be saved here without anchors or cables,

* Columbian Navigator, p. 38.

† Earle's Sailing Directions, 1799, p. 29.

by running up the N.E. part of the harbour, which is all soft mud *.

The English in 1742, took possession of the island of Ruatan, and built a fort in which they put a garrison of 250 men; one Pitts, a logwood cutter, was its first governor, who never had a successor †. "Our ships, bound from Honduras to Jamaica, "touch at Port Royal when they want water or "have sprung a leak; and those which go from Ja-"maica to Honduras, take pilots there for the Bay ‡." This fine island is claimed by *H. H.* the Cazique of Poyais. "The Spaniards have a kind of military "station or look-out post on this island; this, how-"ever, may rather be considered as intended to es-"tablish their right to it by occupancy than as a "means of defence, as the force does not consist of "more than five or six men §." The small islands adjoining the east end of Ruatan, named *Helena Moratte*, and *Barbaretta*, may be deemed only as detached parts of the former; they are situated on a flat, extending from Ruatan, and are only separated from each other by a narrow channel of the sea. They are frequented by turtles, and abound in Indian rabbits, an animal something larger than a

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* Earle's Sailing Directions, 1799, p. 29.

† Jeffery's West India Atlas, p. 17.

‡ Ibid. p. 17.

§ Henderson's Honduras, p. 194.

hare, the flesh of which is considered very delicate. Captain Henderson, on his return from Mosquitia, was driven by stress of weather to take shelter under Barbaretta, on the beach of which he constructed a hut, but could not gain the interior without great difficulty; the surface though high, being nearly covered with impenetrable underwood. "After a walk of about a mile and a half along the "beach, in a contrary course to the one I had pursued "the day before, we came to the rocks, and here, al-"though our progress seemed less difficult to the "eye, it scarcely presented fewer obstacles to the "feet. Difficulties, however, sink before determi-"nation. I was resolved to mount, to it therefore "I went with hands and knees. After some "trouble, I gained a firm station on a toler-"able eminence: and without resorting to the "extravagant and affected language sometimes used "on similar occasions, I might truly say, the whole "was enchantingly beautiful and picturesque. The "spot on which I stood might be connected with a "space of somewhat more than half an acre, entire-"ly clear of trees, growing with a luxuriant grass. "Beyond this the whole became a thick continued "grove,

"Where scarce a speck of day,
"Falls on the lengthened gloom."

THOMSON.

"At the bottom of the rock, the sea rolled with

" loud and haughty sway, and the confused mass of " stone which lay scattered about, at once confes- " sed its uncontrollable dominion *."

Guanaja, vulgarly called *Bonaca*, was discovered by Columbus, and is about 60 miles in circumference. It lies about the distance of 40 leagues W. S.W. from the *Swan Island*, and 20 leagues from Black River. " The part of the island we " were on was highly romantic and picturesque, " and like Ruatan, profusely covered with trees. Its " natural productions appeared nearly the same. " The little bay in which we anchored was of great " depth, and so transparent that the shell fish and " coral rocks at the bottom might be clearly discern- " ed †." This island contains abundance of limestone; and lapis calaminaries, an ore of zinc, has been discovered here. The land is very high, and it can be seen at a great distance off at sea.

The harbour on the south side is called *Half-moon Kay*, from a small island of that name and shape, close to its entrance; it is also the largest of several, that lay about the entrance, and has cocoa-nut trees growing on it. There are several other kays inside. To go to the watering place, you must steer west from the Half-moon Kay, for the middle, or *Trolan's Kay*, and from thence W. by N. for the kay

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* Henderson's Honduras, p. 194.

† Ibid. p. 176.

which is nearest the island, and called *Frenchman's Kay.* Then run round the north-east side, between it and the island, observing to keep close to the reef, and to fetch as near as you can to the kay, and when it bears East from you, to let go the anchor. "There are several patches of rocks lying "to the southward and westward; but as the water "is very clear, those dangers may be avoided *." Between Half-moon Kay, and the S.W. Kay, and about mid-channel over to the eastward, lies a very dangerous shoal, where there is hardly eight feet water in some places; the bad effects of which were felt by H. B. M. sloop Swift, which struck upon it in 1764, and was thereby obliged to throw her guns overboard †. "Rattan and Bonaca, for "the conveniency of very fine harbours, the good-"ness of the soil, pureness of the air, the great "quantity of fish and wild hogs, cocoa-nuts, fine-"ness of water and commanding ground; those "islands are proverbially called in that country, "'*the Garden of the West Indies; the Key to* "*Spanish America, New Gibraltar,*' &c.: and they "of themselves, from their natural strength, might "be made impregnable, being tenable with a very "small force ‡.

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* Columbian Navigator, p. 37.

† Directions for Sailing to the Moskito Shore, Rattan, and Bay of Honduras, &c. by Captain Hester.

‡ Wright's Memoir, p. 16.

Swan Islands, called by the Spaniards ***Santanillas***, are two islets, situated about 300 miles from the west end of Jamaica, and about 90 miles distant from Black River. They are surrounded by a reef, excepting on the S.W. side, where there is anchorage. Considerable quantities of fustic grow here, and great numbers of turtle resort to them, to lay their eggs. Vessels from Jamaica, bound to the Mosquito Shore and Bay of Honduras, usually endeavour to make these islands, from whence they take a fresh departure. It is in contemplation to establish a few fishermen's families on them, for the purpose of being able to supply pilots to vessels, bound to Black River and Balize.

Old Providence, lies in latitude 13° 26′ N.; it is only two leagues and a half long, and one broad; its most northerly point, called *Santa Catilina*, is separated from it by a narrow channel, on which the Buccaniers had built a bridge *. It is nearly surrounded by a reef, which also incloses the isle of Catalina. A break on the reef, on the western side, admits vessels to an anchorage, in 4 fathoms †. This island formerly belonged to the Earls of Warwick, and its possession was secured to England by the 8th article of the American treaty in 1670, but it afterwards reverted to the Spaniards. It has lat-

* Jeffery's West India Atlas, p. 11.

† Columbian Navigator, p. 31.

terly been in possession of the independent chief, General Aury, who has built a town there, called *Isabella*. Its present population is between three and four hundred souls, exclusive of the garrison. It has been very much celebrated in the history of the Buccaniers, who fortified it, and made it for some time their principal retreat. In 1665, Mansvelt, the pirate, sensible of the great convenience of these islands, in his descents on the Spanish Main, took them, and connected them by a bridge, intending to raise provisions on them for his whole fleet, leaving a garrison and French governor; the latter delivered them soon after to the Spaniards, who fortified them, but they were subsequently taken by the Buccaniers *. Notwithstanding the smallness of this island, it may be considered as one of the best in the West Indies, both on account of its fruitfulness and the salubrity of its air; to which we may add, the facility of fortifying its shores; it is watered by four streams, two only of which are dry in summer; the woods, composed of cedars, fustic, and other trees for dying, are full of an incredible number of pigeons; guanas, whose flesh in taste resembles that of a chicken, are in great abundance; and there is not a serpent, or any other venomous creature to be found †.

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* Columbian Navigator, *art.* Mosquitia, p. 31.

† Jeffery's West India Atlas, p. 11.

San Andres, sometimes called *St Andrews*, and *St Andreas*, lays in latitude 12°. 30′, with the north point of the island N. by E. the middle E. by S. and the south point S. E *. San Andreas is about 18 leagues from Old Providence. At the S. W. side, you may anchor in very good sandy ground. About a mile from shore, you have from 15 fathoms to 6 fathoms. You may come to an anchor in what water you please †. On the west side there is a fine harbour called the *Cove*, where large vessels may anchor within a cable's length of the shore; "the water here is so deep that the Mon-" arch, a ship of 600 tons, anchored with a cable a-" stern, within a few yards of the shore ‡." On the east side there is good anchorage in *Cocoa-Plumb-Tree-Bay*; the entrance is between two small islets; on the bar there is two and a half fathoms water. This is an excellent harbour for vessels not exceeding 200 tons: up the harbour towards the north end, there is fine shelter, and plenty of wood and water to be had.

Mr Weatherhead, a medical officer attached to the army of General Macgregor in 1819, and who has

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* Columbian Navigator, p. 31.

† Earle's Sailing Directions, p. 28.

‡ An Account of the late expedition against the Isthmus of Darien, under the command of Sir Gregor M'Gregor, by W. D. Weatherhead, Esq. London 1821, p. 15.

since published, rather a biassed account of the late expedition against Darien, influenced probably by his own disappointment, says, "the Island of St An-" drews is a coral formation, of small size, within a " few hours sail of the Island of Old Providence and " the Corn Islands, and about forty-eight hours sail " from the main land of South America. It is " beautifully varied by hills and valleys covered " with woods, sugar and cotton plantations, provision " grounds, and excellent pasture for oxen; the beef " and pork here are very superior, fowls are in a-" bundance, yams, plantains, and cocoa-nuts, pines, " shaddocks, forbidden fruit and tamarinds, onions, " shalots, &c. &c. enrich the provision grounds, and " grow round the picturesque houses and cottages of " the inhabitants *." In another place he says, "two " roads lead from the cove the length of both sides " of the island; they are, however, somewhat diffi-" cult at landing to find out; indeed, so snugly are " all the houses on the island situated, that only one " of them can be perceived from the sea, it appear-" ed to us to be uninhabited. The island is ex-" tremely healthy, rich and beautiful, perpetually " cooled by delightful sea breezes †."

The island of San Andres contains about three hundred white persons and people of colour, and be-

* Weatherhead's account of the expedition against the Isthmus of Darien, p. 15. † Ibid.

tween ten and twelve hundred slaves; "they carry "on a considerable smuggling trade with the Main; "ship cotton, &c. for Jamaica, supply Chagres and "Porto Bello with ground provisions, and I believe, "annually dispose of a number of the children of "their slaves at the ports on the South American "coast *." In the month of December 1815, two Carthagenian privateers landed their crews and captured the island, putting the Spanish governor and soldiers to the sword; they spiked the guns of the batteries, and burnt the government house, and Governor Gonzale's plantation, at the same time carrying away many of the slaves. In 1818, General Aury sent his sick here from the island of Providence, and in April 1819, General Macgregor came to an anchor in the Cove with his fleet; "the island of "St Andreas was taken formal possession of by him- "self and the ex-governor, in the name of the govern- "ment of New Grenada, on Sunday the 4th April, "1819. At twelve o'clock the patriot colours of "Grenada were hoisted on Leva-hills, near the scite "of an intended battery, which was to command "the cove, and a salute of 21 guns was fired by the "Hero upon the occasion †," immediately after which

's commissioned as a national vessel, and un-

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itherhead's Account of the Expedition against the
s of Darien, p. 15.

der a second salute of twenty-one guns, hoisted the independent standard of New Grenada, when his Excellency Don Juan Elias Lopez, the governor of Carthagena and Delegate of the General Congress of New Grenada, conferred on her the name of *El Macgregor* *, in compliment to the commander in chief. † A dinner was given on shore by the ex-go- " vernor, at which the principal officers were present, " and chief inhabitants of the island; an oath of " allegiance to the government of New Gre- " nada was taken, and General Wolf's song, " *The soldiers business is to die*, was sung with " all that enthusiasm which the occasion inspired. " It was the intention of Sir Gregor to convert St " Andreas into a depôt for the sick, to erect forts, " &c. upon the island, and to leave a part of the " artillery and stores †." After the recapture of Porto Bello, General Macgregor returned here, and again took formal possession of the island, appointing Colonel Woodbine, the Adjutant-General of the army, to be its governor. At the capture of Porto Bello, he particularly distinguished himself; Weatherhead says, " Colonel Woodbine now led the " advance, who, from his experience in bush-fight- " ing in the late American war, when at the head of " the Indians, was well calculated for this descrip- " tion of service ‡." This officer, who has been

* *The Macgregor.*

† Weatherhead's Account of the Expedition against the Isthmus of Darien, p. 19 and 20. ‡ Ibid. p. 25.

several years in the Cazique's service, was promoted in 1819, to the rank of Brigadier-General, and at the same time received the *Military order of the Green Cross*; and in 1820, in consideration of his long and faithful attachment, was entrusted with the important office of Vice-Cazique of Poyais; and it is my firm opinion, that no one could have been found more deserving and worthy of this confidence, or more capable of filling the important station with credit to himself, and benefit to the native Indians, as well as the settlers in general.

There are some islets or kays in the vicinity of San Andres. At the distance of six leagues to the eastward are the E.S.E. *Kays*, they are three in number, and have reefs all round them; there is good anchorage for small vessels, but a person ought to be well acquainted. The S.S.W. *Kays*, called by the Dutch *Abu-kerken*, and by the Spaniards *Albuquerque*, are three islets with good anchoring ground. There is nothing to fear here; the water about them is deep and clear, and every thing may be seen. There are a few rocks above water, close to the kays, but they will be avoided by keeping the island of San Andres N. by W. until the S.S.W. kays bear S.W. by S. when you may proceed as convenient*. Both the above kays are covered with cocoa-nuts; and large quantities of turtle are caught here in the season, many of them

* Columbian Navigator, *art.* Mosquitia, p. 31.

of the Hawks-bill species. In a clear day, both the E.S.E. and S.S.W. kays may be distinctly seen from the heights of San Andres.

Corn Islands, called by the Spaniards *Islas de Manglares*, lie to the eastward of Pearl Key Lagoon; they are of considerable height, the south-western is the largest. From the smaller island stretches a reef, about two leagues distant on the north-east side of the island. These two islands are reckoned 50 leagues distant from Sandy Bay*. The largest is nearly surrounded by a reef, but there is anchorage on the western side, in clear sandy ground, in 4, 5, or 6 fathoms water. *Little Corn Island*, is full of large cocoa-nut trees, and has fresh water: in the *Great Corn Island*, plenty of good fresh water may be found, by digging small holes in the sand. Several English families reside upon these islands, where they raise cotton and plenty of stock; the population may be estimated at one hundred souls.

MOUNTAINS.

The chief of these to the westward, are called the *Poyer Hills*, and by the Spaniards *Sierras de la Cruz*. This high land terminates with a remarkable sugar loaf hill, supposed to have been a volcano, which stands several leagues inland, upon the eastern bank of Black River, and nearly south from

* The West India Pilot, 33.

the entrance; further westward, a little distance in the interior, stands the high round hill called the *Picacho*. A chain of lofty mountains run diagonally from the Bay of Truxillo, nearly south-east, to Saint Juans, which are deemed inaccessible, and serve as a strong barrier between the Spanish and Mosquito territories *.

CLIMATE.

The climate is mild for those latitudes, and being continental, not nearly so hot as the islands in the same parallel †. The great salubrity of the air ‡ of this delightful and most valuable country §, supplies a constant fund of health and activity to the European settler, a blessing which is seldom enjoyed in the same degree in any other part of either North or South America. With the exception of a few months in the year, this country is constantly refreshed by regular sea breezes, accompanied by an average of heat that may be taken at the temperature of 80 degrees ||. The temperature of the air

* Wright's Memoir, p. 11.

† Memoir of the Mosquito Territory, by Captain Wright, R. N. 1808, p. 11.

‡ Ibid, p. 11.

§ Account of the British Settlements on the Mosquito shore, by Bryan Edwards in 1773, 5th Edit. vol. 5, App. p. 202.

|| Account of the British Settlement of Honduras, by Captain Henderson, 44th Regiment, 2d Edit. 1811, p. 13.

varies indeed considerably according to the elevation of the land, but with this exception, the medium degree of heat is much the same throughout the country. Captain Henderson, speaking of the climate of Honduras, very justly observes, "The "climate of this part of the American continent is "greatly superior to that of most other parts of the "same vast portion of the globe, either in higher or "lower degrees of latitude. It is equally superior "to the climate of the West India islands general-"ly; for persons whose health and constitutions "have become impaired from the effects of the "latter, very frequently acquire a sudden restora-"tion of both after an arrival at Honduras *." This observation holds not only equally good, but even in a superior degree, with respect to the Mosquito shore, and there certainly is not any where to be found in either the Northern or Southern continent of America so salubrious and delightful a climate.

SEASONS.

A tropical year seems properly to comprehend but two distinct seasons, the *wet* and the *dry*, and these have also their marked difference, though nature may not have determined the shades of varia-

* Account of the British Settlement of Honduras, by Captain Henderson, 44th Regiment, 2d Edit. 1811, p. 12, 13.

tion with the same strong lines which she has affixed to most other situations under her dominion; but as the rains in these climates constitute two great periods, it may be described like the European year, under four divisions.

The Spring or vernal season may be said to commence with the months of April and May, when the foliage of the trees evidently become more vivid, and the savannas begin to change their russet hue, even previous to the first periodical rains, which are now daily expected, and compared with the autumnal rains, may be said to be gentle showers. After these rains have continued a short time, the weather becomes dry, settled and salutary; and the tropical Summer or *dry season*, reigns in full glory. The sun, during this space, is always most powerful, and its vivid rays are not mitigated by the same uniformity of breeze that prevails during the other months of the year. Not a cloud is to be perceived; and the nights at this season are transcendently beautiful. The clearness and brilliancy of the heavens, the serenity of the air, and the soft tranquillity in which nature reposes, contribute to harmonise the mind, and produce the most calm and delightful sensations.

The moon too, in these climates, displays far greater radiance than in Europe. The smallest print is legible by her light, and in the moon's absence, her function is not ill supplied by the brightness of the

milky-way, and by that glorious planet Venus, which appears here like a little moon, and glitters with so refulgent a beam as to cast a shade from trees, buildings and other objects, making full amends for the short stay and abrupt departure of the crepusculum or twilight *.

The state of the weather commonly continues with little variation, from the middle of June until the end of August, when the diurnal breeze begins to intermit, and the sun, during this space, is always more powerful, and instead of a steady and refreshing wind from the sea, there are usually faint breezes, and calms alternately. These are preludes to the second periodical or autumnal seasons. Large towering clouds, fleecy and of a reddish hue, are now seen in the morning in the quarters of the south and south-east; the tops of the mountains at the same time appear clear of clouds, and the objects upon them wear a bluish cast, and seem much nearer to the spectator than usual. When these vast accumulations of vapour have risen to a considerable height in the atmosphere, they commonly move horizontally towards the mountains, proclaiming their progress in deep and rolling thunder, which reverberated from peak to peak, and answered by the distant roaring of the sea, heighten the majesty of the scene, and irresistibly lift up the

* Edward's History of the West Indies, vol. 1st. p. 9.

mind of the spectator to the great Author of all sublimity *.

The waters, however, with which these congregated vapours load the atmosphere, seldom fall with great and general force until the beginning of October.

But the *wet season*, as it is emphatically denominated, is not considered here the season of disease. It is fatally otherwise with the whole of the West Indies. At the beginning of November, what are called the *norths*, north winds, commence, and generally continue, with little variation, till the return of the month of March. Whilst these winds last, the mornings and evenings are cold, frequently unpleasantly so; and what in this country is understood by a *wet north*, might perhaps furnish no very imperfect idea of a November day in England; a *dry north*, on the contrary, is healthful, agreeable, and invigorating †. The north wind having acquired sufficient force, the atmosphere is cleared; and now comes on a succession of serene and pleasant weather, the north-east and northerly winds spreading coolness and delight throughout the whole of the country. If this interval, therefore, from the beginning of December to the end of April, be called winter, it is certainly the finest winter on the

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* Edward's History of the West Indies, vol. 1st, p. 11.

† Henderson's Honduras, p. 14.

globe. To valetudinarians and persons advanced in life, it is the climate of Paradise *.

SOIL.

The soil is every where fertile in a very uncommon degree, and capable of producing in the utmost perfection, whatever is produced between the tropics †. Few countries, perhaps, ever possessed higher advantages, in an agricultural point of view, than the greater part of that which is placed contiguous to the Bay of Honduras. The extraordinary benefits that might result from the happiest combination of climate and soil, are almost disregarded; and the cultivation of the earth, which in almost every other spot of the habitable world, claims a first attention, is here held of no consideration at all ‡. The soil is so rich, that, until three or four seasons of ratoon canes has in some degree impoverished the land, no sugar can be produced; the first growth rising to the great height of sixteen to eighteen feet, and of several inches diameter; which naturally impoverishes the saccharine juices. This fact must sufficiently tend to shew the great ferti-

* Edward's History of the West Indies, vol. 1, p. 13.
† Ibid. p. 208.
‡ Henderson's Honduras, p. 37, 38.

lity of the soil in producing maize, Indian corn, cotton, coffee, and provisions of all kinds, exceeding by far any thing known in the West India Islands *.

In the month of September 1806, Captain Henderson was sent from Balize to the Mosquito Shore, charged with a variety of presents, ordered by government for the Chiefs of that nation; he says, "The soil they inhabit is abundantly fertile, and "capable of many modes of cultivation. Indian "corn of the finest quality, plantains, cassava-root, "varieties of the yam and sweet potatoe, are plen- "tifully raised from it. The sugar-cane, cotton "and tobacco, thrive equally well; and in the "mountainous situations, coffee, no doubt, might "be produced, not inferior to that which is raised "in the West India Islands †." Had Captain Henderson visited Black River, he would have there seen as fine coffee as is produced in any part of the world.

Every variety of animal and vegetable nature, for use or beauty, for food or luxury, has been most liberally bestowed on this country. It is every where plentifully watered; and the soil is almost every where fertile in a very uncommon degree, and

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* Captain Wright's Memoir, p. 11, 12.

† Henderson's Sketches of the Mosquito Indians, p. 212, 213.

capable of producing, in the utmost perfection, whatever is produced between the tropics. The cotton bush, the cocoa or chocolate nut, and vanelloes, flourish spontaneously all over the country; indigo, too*, is a native, and appears to be the same sort with that of the neighbouring province of Guatimala †, which is accounted the best of any. The sugar-canes arrive here to as great perfection as in any of the islands ‡. The productions common to the West India Islands, with a considerable variety of such as are more familiarly known to that part of the continent which is comprehended within the tropics, might unquestionably be cultivated at Honduras, with equal, if not, in many instances, with superior success. The sugar-cane viewed as the most valuable of all, thrives with the richest luxuriance. Coffee, another, and now become one of the most profitable articles of our island culture, grows equally well. Cotton must likewise be included. Indigo might also amply reward the labours of the cultivator; an inferior sort is indigenous. Indian arrow-root is abundantly produced, and pimento has been tried under the most encouraging appearance of profit §. " Previous to the removal of the " English settlers from the Mosquito Shore, several

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* *Indigofera Argenta*, Linn. † *Indigofera Disperma*, Linn.
‡ Edward's West Indies, vol. 5th, App. p. 208.
§ Henderson's Honduras, p. 39.

"sugar plantations had been formed on Black River, "and the sugar and rum which they furnished was "very generally deemed, by competent judges, not "inferior to the same articles the produce of Ja-"maica *."

One might cultivate rice, cocoa, indigo, silk grass, tobacco, &c. to advantage in this country; at present, we get from it tiger and buck-skins, dying-woods of several kinds, gums and balsams, indigo, cochineal, sarsaparilla, tortoise-shells, zebra-wood, for cabinet-makers, &c. but all these only in small quantities †.

From Bluefields to Black River, the country is generally flat for many miles from the sea-coast; but it rises into hills much sooner to the westward of Black River, and to the southward of Bluefields ‡. The savannas, or plains, afford the richest pasturage, being capable of any sort of cultivation §. Endless tracts of fine ridges interspersed all over the country, would supply an inexhaustible fund of tar and turpentine; the trees being so redundant with the liquors, that when put into the deepest rivers they instantly sink ||.

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* Henderson's Honduras, p. 39, 40.

† Jeffery's West India Atlas, p. 11.

‡ Edward's History of the West Indies, vol. 5th, *app.* p. 208.

§ Wright's Memoir, p. 14.

|| Ibid, p. 12.

MINERALS AND MINERAL SPRINGS.

GOLD,--this is the only mineral that has yet been discovered in this country, with the exception of lapis calaminaris, in the Island of Guanaja: many of the rivers, by washing the sands in fine sieves, furnish the native globules of pure gold. Those mines that have been discovered are very rich: "I shall particularly mention one at Albra-"poyer, which might have turned out to infinite "advantage to those concerned, had honesty in the "conducting of it been as proportionably attended "to as the mine was rich. This mine, with several "others might, with proper management, be again "worked to great benefit *." In the neighbouring province of Honduras, there are a great many mines both of silver and gold; it is therefore probable that mines of the former metal will also be discovered here, when the country becomes more peopled, for the ridge of mountains that traverse the Mosquito territory, are spurs of the same great chain that separate this country from that of Honduras and Nicaragua, and which contain many rich mines of both these metals. The Mexican gold is chiefly alluvial, but partly found in primitive moun-

* Wright's Memoir p. 14.

tains, and mixed with silver, in the mines of that metal *.

Lapis Calaminaris,--this mineral is found in the Island of Guanaja; it is an ore of zinc, of a spongy substance, and a lax and cavernous texture, yet considerably heavy. Zinc, which forms the connecting link between the ductile metals, and those which are not so, when found oxidated, is then commonly called Calamine, or Lapis Calaminaris. Calamine, according to Werner, is not found in the primitive rocks. It oftener occurs sulphurated, and then the vulgar name of it is Pseudo-galena, or Blende. It generally accompanies galena, or sulphuret of lead. It is often mixed with iron, gold, and silver. The latter in particular is frequently found in sulphurated zinc. It combines with almost all the metals, and some of its alloys are of great importance. Zinc combines readily with copper, and forms one of the most useful of all the metallic alloys. When the zinc does not exceed a fourth part of the copper, the alloy is known by the name of brass. When the alloy contains three parts of zinc, and four of copper, it assumes a colour nearly the same with gold; but it is not so maleable as brass. It is then called pinch-beck, princes metal, or Prince Rupert's metal. Tin and zinc may be

† Edinburgh Gazetteer, Introduction, p. 77

easily combined by fusion. The alloy is much harder than zinc, and scarcely less ductile. This alloy is often the principal ingredient in the compound called pewter. The importation of this ore into the United States of America, is free of duty; it may perhaps therefore merit the attention of some of the settlers.

At the junction of two of the branches of the Black River, or Rio Tinto, and in latitude 15°. 8′. are two springs, the one *hot*, the other *cold*; they are situated close to each other at the base of a ridge of mountains, which contain, according to report, several rich mines of gold, and probably also some of the other mineral ores.

TREES, SHRUBS, PLANTS, &c.

MAHOGANY *,—This beautiful and valuable tree grows in vast quantities in various parts of this country; it thrives in most soils, and varies both in grain and texture with each; that which grows among the rocks is smaller, but very hard and weighty, of a close grain and beautifully shaded; while the produce of the low and richer lands is observed to be more light and porous, of a paler colour and open grain; and that of mixed soils to hold a medium between both. The tree grows very tall and

* *Swietenia Mahagoni*, Linn.

straight, rising often sixty feet from the spur to the branches, and is usually about four feet in diameter. The leaves are of a beautiful deep green, the flower of a reddish or saffron colour, and the fruit of an oval form, about the size of a turkey's egg; while that which grows in the mountainous districts hardly exceeds the size of a nutmeg: the whole appearance of this tree, is the most beautiful that can be imagined. It is said, that some have grown to the enormous height of one hundred feet. The wood is generally hard, takes a fine polish, and is found to answer better than any other sort in all kinds of cabinet ware. It is a very strong timber, and answers very well in beams, joists, plank, board and shingles; and has been frequently put to those uses in Jamaica in former times *. The Spanish men of war taken by the English, at the last memorable siege of Gibraltar, in 1782, were of the finest species of this wood.

The mahogany tree is seldom found in clusters, or groups, but single and often much dispersed †; there are two seasons of the year for cutting it; the first commencing shortly after Christmas, the other about the middle of the year. The tree is commonly cut about twelve feet from the ground. The workmen raise a scaffolding four or five feet high

* Brown's Civil and Natural History of Jamaica, p. 159.

† Henderson's Honduras, p. 62.

for the axe-man employed in levelling it. The part beneath, extending to the roots, is not only of a larger diameter, but of a closer texture than the other parts, most elegantly diversified with shades or clouds, or dotted like ermine, with black spots, and moreover takes the highest polish, with singular lustre. This part is only to be come at by digging below the spur to the depth of two or three feet, and cutting it through, which is so laborious an operation, that few attempt it, unless they are uncommonly curious in the choice of their wood, or to serve a particular order *. The body of the tree, from the dimensions of the wood it furnishes, is deemed the most valuable; but for purposes of ornamental kind, the branches or limbs are generally preferred, the grain of these being much closer, and the veins more rich and variegated. Some of the wood is rough squared upon the spot, but this part of the labour is generally suspended until the logs are rafted to the entrance of the different rivers. "It has been remarked, by those of most experience "in the occupation, that the mahogany which is "fallen between the months of February and Sep-"tember is very liable to split; the same observa-"tion extends to that also which grows in rocky or "mountainous situations. This is the bay-man's "greatest evil, for the wood more particularly sub-

* Mortimer's Commercial Dictionary.

" ject to this inconvenience is invariably the largest " and of the finest quality. There is but one pre- " caution against this, whenever the tendency to- " wards it is discovered, which is, to keep the tree " immersed as closely as possible in deep water until " the time for shipping, or otherwise disposing of it " arrives *."

The price of mahogany on the Mosquito Shore, is only £12 Jamaica currency *per* thousand feet. At Balize it sells from sixteen to thirty pounds. This difference of price arises from the cheapness of labour in the Mosquito territory, and its greater abundance. " To give some idea of the profit, " though perhaps the instances of such success are not " numerous, which has been known to attend the " cutting of mahogany : a single tree has been found " to contain 12,000 superficial feet, and this to pro- " duce upwards of one thousand pounds sterling †." When this country was is possession of the British, the exportation of mahogany in 1769 amounted to 800,000 superficial feet ‡.

Logwood §.—This tree is small and crooked, with a dark rough bark, the branches armed with solitary auxiliary prominent thorns : the leaves are wedge-sha-

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* Henderson's Honduras, p. 62.

† Ibid.

‡ Edward's Account of the British Settlements on the Mosquito Shore, drawn up for the use of Government in 1773.

§ *Hæmatozylum Capechianum*, Linn.

ped, very smooth and shining; the flowers are numerous, and appear either solitary, or in pairs, and are of a reddish yellow colour. In 1715 it was brought to Jamaica, in order to be propagated there for exportation, and it now grows in many parts of that island. It thrives best in low swampy lands, or shallow waters, where the bottom is rich and moderately firm, and seldom rises above twelve or fourteen feet in height, or exceeds seven inches in diameter; but the trunk is generally short and uneven *. It may be classed among productions of an aquatic kind, and can seldom be obtained in any abundance but in a low swampy soil or contiguous to fresh water creeks and lakes, on the edges of which the root, the only valuable part of the tree, spreads to a very wide extent †. I am not aware that this tree is to be found in the Mosquito territory, and if so, in only very small quantities. Captain Henderson says, "it may likewise be observed, that it "is a production of local growth, and but rarely dis-"covered in any direction southwardly from the "settlement of Balize ‡." As this plant produces a very valuable dye, and has been naturalized in Jamaica, I think there is little doubt, but what it might thrive on some parts of the eastern coasts of

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* Brown's Civil and Natural History of Jamaica, p. 221.
† Henderson's Honduras, p. 70.
‡ Ibid. p. 71.

this country, were any of the settlers to be curious enough to make the experiment. This tree it is said attains to maturity in five years.

CEDAR *, is found in great abundance in this country, and grows to the height of seventy or eighty feet, and is sometimes found from five to six feet in diameter; the trunk is covered with a rough bark, marked with longitudinal fissures; but when young, the bark is smooth and of an ash-colour, growing rough as it advances in age; when fresh cut, it has an unpleasant smell, resembling that of asafœtida; the timber, however, has a pleasant smell when dry, and is soft, light, and of a reddish colour. The leaves are sometimes near three feet long, and have a smell resembling that of the bark. The flowers are small and of a whitish flesh-colour. The wood of this tree is much esteemed for wainscoting, and the internal partitions of most sorts of cabinet ware. It makes good planks and shingles for houses, but cannot be made into casks, as all spirituous liquors dissolve a great quantity of its natural resin, and from thence acquire a strong bitter taste †. It is much used for canoes and periaguas, some of which have been hollowed out of its trunk, not less than forty feet long, and six broad: the softness and light-

* *Cedrela Odorata*, Linn.

† Brown's Civil and Natural History of Jamaica, p. 158.

ness of its wood render it peculiarly proper for this purpose; and it is a valuable material for chests of drawers, and other articles of household furniture, because its odour is offensive to insects.

SANTA MARIA.—This is reckoned pretty good timber-wood; but it must be kept under cover, for it does not bear the weather well: it is frequently used for staves and headings *. There is another tree of the same name, which I believe is the *Terminalia latifolia* of botanists, and the *Broad-leaf tree* of Jamaica. This wood has lately become greatly in repute for ship-building, and its importation into Great Britain is encouraged by its being declared, for a limited time, free of duty.

SUMWOOD, or SOMEWOOD, is a peculiar non-descript wood, fit for many purposes of ship-building; "the valuable properties of it are, to be impregna-"ble to the worm, and resist rust; this I had an "opportunity of ascertaining very fairly, by getting "the carpenters of the Swift to build a boat of it for "me, 28 feet length of keel, that I used all the "time I was in that country, and a twelvemonth "after I returned to England, finding it answers all "the good qualities that were given of it †."

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* Brown's Civil and Natural History of Jamaica, p. 372.

† Memoir of the Mosquito Territory, by Captain John Wright, R. N. p. 13.

OUCA, or BASTARD LIGNUMVITAE *.—This tree rises to a very considerable height; its trunk is often above two feet and a half in diameter, and is covered with a thick scaly bark. The leaves are about three inches long, and two broad, smooth, with a strong mid-rib, and many interbranching veins; the wood is hard, dark coloured, and close grained. It is esteemed as one of the best timber woods of the country.

FUSTIC †.—This tree is found in many parts of the country, and abounds particularly in the Santanilla, or Swan Islands. It has a large and straight trunk rising to the height of upwards of sixty feet, with long and large roots; the bark is of a yellow colour. The wood is very fine and solid, and of a fine yellow; the leaves are alternate, on shortish stalks, rough, dark green, pointed, and larger towards the footstalk; the fruit is as large as a nutmeg, round, formed like a mulberry, but greenish, both within and without, with brown seeds. This is a fine timber wood; and a principal ingredient in yellow dies, for which it is chiefly imported into Europe. The berries are sweet and wholesome, but not much used, except it be by the winged tribe, by whose care it is chiefly planted ‡. It is principally used in

* *Rhamnus Sarcomphalus,* Linn.

† *Morus Tinctoria,* Linn.

‡ Brown's Civil and Natural History of Jamaica, p. 339.

general dyeing, and seldom in printing. It goes much further than weld.

YELLOW SANDERS*, is of a pale yellowish or brownish colour, of close even grain, and with a smell approaching to a mixture of musk and roses, and of a somewhat acid taste, with a slight bitterness; it is a most beautiful wood, and yields by digestion a rich yellow tincture. On account of its fine fragrance, it is held in universal estimation. The wood of this tree is said to make good inside timbers. There is a shrubby plant† of this species which is sometimes found in swampy places.

PINE‡.—This tree rises to the height of fifty or sixty feet, with upright uneven rugged branches; the leaves have rough, or finely serrated edges, and are crowded about the extremities of the branches. About the different rivers and lagoons, particularly towards the coasts, are found extensive tracts of land abounding with pine trees of various kinds. Captain Henderson, speaking of those found at Balize, says, "The timbers which these furnish, can scarcely "be exceeded in size, and are generally considered for "every necessary purpose, greatly superior to what "can be imported of the same kind from the Unit-

* *Santalum*, Linn.
† *Pterocarpus Ecastaphyllum*, Linn.
‡ *Pinus Occidentales*, Lambert.

" ed States. But the cause which has been before " assigned, the high value of labour in this country, " has occasioned the settlers, in most instances, ra- " ther to prefer purchasing such materials from the " Americans, than have recourse to those before " them of domestic growth *." Several saw mills, some of them to be worked by steam, are about being erected in the territory of Poyais, for the purpose of cutting lumber, both for domestic consumption and exportation.

Endless tracts of pine ridges interspersed all over the country, would supply an inexhaustible fund of tar and turpentine: the trees being so redundant with the liquors, that, when put into the deepest rivers they instantly sink †. While the British were in possession of Black River, several of the settlers engaged in the manufacture of tar, and some of the ovens used by them are still standing. The large quantities of pitch pine ‡ upon the borders of Black River Lagoon, might be turned to valuable account, and become an article of extensive exportation to Europe, and particularly Great Britain; and there are few occupations that would better repay the labours of the settler, as may be seen from the following extracts, copied from Warden's Account of the

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* Henderson's Honduras, p. 109.

† Wright's Memoir, p. 12.

‡ *Pinus Tœda,* Linn.

United States. "From the pitch pine which covers "the high sandy soil of the low country, an immense "quantity of turpentine, tar, and pitch, is extract-"ed. These commodities formerly enriched many "farmers, who gained from the labours of one man "between £100 and £200 a-year. The *turpentine* "is obtained by the simple process of making two "slits in the trunk of the pine, each about a foot in "length, under which vessels are placed to receive "the resin, or gum, as it flows. For extracting *tar*, "a circular basin, or floor of potter's earth, is made, "and so perforated as to allow the escape of the re-"sinous matter, which is received in carts placed "underneath as it runs from the burning pine. "*Pitch* is formed by boiling the tar in pots of iron, "or in vessels formed of potter's earth *." In Nor-way, the inhabitants extract tar from the root of the fir tree †.

MANGROVE ‡.—There are three species of this tree, the black, white, and red. This tree is generally found on the borders of the sea, in whose waters alone it seems to thrive; and there, only in such places as have a soft and yielding bottom. The

* Warden's Account of the United States of America, vol. 2d, p. 389.

† Kordanz's Europ. Commerce, p. 228.

‡ *Rizophora Mangle*, Linn.

fruit of this tree germinates within the cup, and grows from the top downwards, until it acquires a due degree of weight and perfection: then it falls off; and as the root part is always thickest, and hangs lowest, it drops in that direction, and is thus received in the natural position in the mud below: the leaves immediately unfold, and in a few minutes you see a perfect plant, sometimes of ten or twelve inches in length, which soon begins to shoot its roots, and push its growth like the parent stem *.

The trunk of the Mangrove seldom grows to any considerable thickness; it is said sometimes to grow to the height of fifty feet, has a white wood, and rusty coloured bark. The wood is very tough and hard, bears the water well, and the *black* species is much used for knees and ribs in long-boats, and other small craft; for which the archings and angles of its limbs most naturally adapt it. Its lower branches become frequently the supporters of the American oysters, which has given rise to the fabulous account of the growth of this shell-fish †. The *red* species is greatly preferred for the firmness of its texture and its extraordinary durability: the bark it furnishes has been thought little inferior to that of the oak, when applied to the purpose of tanning leather. This species of the mangrove usually

* Brown's Civil and Natural History of Jamaica, p. 211.
† Ibid.

grows on the borders of the sea, or on the edges of the rivers and creeks contiguous to it *.

Sea-side Grape, or Mangrove Grape tree †. This is a large tree; the branches irregularly spreading, not forming a handsome head, but rendered beautiful by the leaves and fruit. The leaves are large, often quite round, of a deep green, with small scarlet veins; the flowers are small and of a whitish colour. It grows on a sandy soil, generally near the sea. The wood, according to Jacquin, is of a deep red colour, very hard, heavy, brittle, but almost incorruptible: when used for posts or pallisades, the part underground becomes as hard as stone. The fruit is said to be good to eat. This tree is found extremely useful, from the naturally formed knees and timbers it supplies for small vessels.

Sapodilla ‡, called by the natives *Eban*, and in the island of Jamaica the *Bully*, or *Nisberry Bully tree*, is found extremely useful for many purposes. It generally grows the tallest of all the trees in the woods; its fruit is small, and the seeds oblong and narrow. It is esteemed one of the best timber trees in Jamaica §. There is another species of it called

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* Henderson's Honduras, p. 108.

† *Coccoloba Uvifera*, Linn.

‡ *Achras*, Linn.

§ Brown's Civil and Natural History of Jamaica, p. 201.

the *White Bully* tree, or *Galimeta wood* *. This tree grows to a considerable height, and is generally furnished with many branches towards the top; but then rise irregularly and at distant stages, as they usually appear in most of the *firs* of Europe. The berries of this tree are black, smooth, and very small †. All the species of this *genus* are found growing naturally in the woods, and are much sought after for the sake of their fruit, which is very agreeable and pleasant to the taste. The bark of several of the species is very astringent, and is called *Cortex Jamaicenis*. This was once supposed to be the true Jesuits bark, but its effect on the negroes has been found to be pernicious.

PALMETTO ‡, PALMETTO ROYAL, or MOUNTAIN CABBAGE, so called, because the upper part of the trunk is sometimes eaten, and supposed to resemble the European cabbage in flavour. This is a most beautiful tree, and Brown says, "may be esteemed "the queen of the woods;" it grows to a very considerable size; rises by a tall straight trunk, which bilges moderately at some distance above the root; and shoots by a straight cylindric tapering body from thence to the top, where it spreads into a large and

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* *Achras Salicifolia*, Linn.

† Brown's Civil and Natural History of Jamaica, p. 201.

‡ *Palma Altissima*, Linn.

beautiful foliage, not unlike that of the cocoa-nut tree*. The sheaths of the leaves are very close, and form the green top of the trunk, a foot and a half in length. The fruits are oblong, obtuse berries of a blue purple colour, and about the size of an olive, containing a stone or nut which is oblong, membraneous, smooth, brittle, inclosing a very hard cartilaginous kernel. "The upper part of the trunk "from whence the foliage springs, resembles a well "turned finely polished baluster, of a lively green "colour, gently swelling from its pedestal, and di- "minishing gradually to the top, where it expands "into branches waving like plumes of ostrich fea- "thers. From the centre of the summit rises the "*spatha* or sheath, terminating in an acute point. "The trunk itself is not less graceful, being a "straight, smooth, slightly annulated column, large "at the base, and tapering from thence to the in- "sertion of the baluster or cabbage†." Within the leaves, at the top of the palm, is found a white heart of eight or nine inches in circumference, which is called cabbage, and which is esteemed a great luxury by the inhabitants, who eat it either raw as sallad, or fried with butter, as well as boiled, and compare its taste to that of the archichoke. Some authors say, that it frequently rises to above 200

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* Brown's Civil and Natural History of Jamaica, p. 342.

† Edward's History of the West Indies, vol. 1st, p. 20.

feet in height, with a trunk no bigger than a man's thigh, and covered with a coat which is impenetrable to a musket ball. *Ray* makes mention of one of these trees that was observed to grow to the height of 270 feet, or thereabouts. *Ligon* mentions some, at the first settlement of Barbadoes, about 200 feet in height; but Mr *Hughes* observes, that the highest in his time, in that island, was 134 feet. *Edwards* says, I am inclined to believe, that I have seen them in Jamaica upwards of 150 feet in height; but it is impossible to speak with certainty, without an actual measurement. Neither the tall trees of Lebanon, (says Hughes) nor any trees of the forest, are equal to it in height, beauty, or proportion; so that it claims among vegetables, that superiority, which Virgil gives to Rome among the cities of Italy:

> *" Verum hæc tantum alias inter caput extulit urbes,*
> *" Quantum lenta solent inter viburna cupressi."*

This tree is found very abundant in the different islands and kays, and its wood is found remarkably serviceable in the construction of wharfs, or when put to any use where a continued resistance to water may be needed.

PALMETO-THATCH *, grows both in the rocky

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* *Palma Brasiliensis prunifera.* Sloane.

hills, and low moist plains near the sea, but seems to thrive best in the former. It shoots by a simple stalk, and rises generally from four or five, to ten or fourteen feet in height. It is always furnished with leaves of the form of a fan, sustained by slender compressed foot-stalks, and bears a great abundance of small berries, which seem to feed both the birds and beasts of the wood, when they are in season. The trunk seldom exceeds four or five inches in diameter; it is called the *Thatch-pole*, and is much used for piles in wharfs, and other buildings made in the sea; for it has been observed to stand the water very well, and is never corroded or touched by the worms: the foot stalks of the leaves are very tough, and serve (when split and pared) to make baskets, bow-strings, ropes, and a thousand other conveniences, where strength and toughness is required. The leaves are called *Thatch*, and are daily used as such in most new settlements and plantations, especially for all the out-houses, and is found to stand the weather for many years; but such coverings are apt to harbour rats, and other vermin, which prevents a more general use of them *.

Iron Wood †, the Ybera Puterana of Marcgrave.—This wood is of a reddish cast, and is called

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* Brown's Natural History of Jamaica, p. 191.

† *Sideroxylum*, Linn.

iron wood, on account of its corroding as that metal does, and its being remarkably hard and ponderous, even more so than ebony. It will not float in water, but sinks like metals. In South America it is used for the shafts of the wheels of water-mills, for the rollers with which the cylinders are jointed for pressing the sugar canes, &c. Iron wood is frequently employed in the manufacture of works of taste, and in the formation of such articles as are required to possess durability.

CALABASH-TREE *.—This tree seldom rises above sixteen or twenty feet in height; the trunk is generally irregular, and the branches crooked and spreading; the wood is very tough and flexible, which renders it very fit for the coach-makers purposes, where it is observed to answer better than any other sort of timber hitherto known †. The shell of the fruit is so thin and close, that it serves to boil water, as well as an earthen pot. The thicker parts are frequently used for button moulds, and it also makes a light and convenient drinking cup, for which purpose they are much esteemed, and are often found so large, as to be able to contain a gallon of water, or other fluid.

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* *Crescentia,* Linn.

† Brown's Natural History of Jamaica, p. 266.

Button Wood *.—This tree grows very luxuriantly in low sandy bays and marshes, and seldom rises above fifteen or sixteen feet, although it has sometimes been known to grow as high as thirty feet; the leaves are smooth and greasy to the touch; the flowers are small and of a greenish yellow. The Spaniards call it *Mangle Saragoza.* It is used for fire-wood, and its bark, it is said, serves to tan leather very well †.

Bullet-Tree.—This is a hard wood, and much esteemed.

Willow ‡.—This tree is very common, and grows on the banks of most of the rivers.

Bamboo §, the large or *Wild Bamboo Cane,* is very common in the cooller swampy bottoms among the mountains, and rises frequently to the height of twelve or fourteen feet from the root; it is jointed like other reeds, is about an inch and a half in diameter near the bottom, and tapers gradually towards the top; the outward coat is hard and smooth, and the body firm, and filled with a soft

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* *Conocarpus Evecta,* Linn.
† Brown's Natural History of Jamaica, p. 159.
‡ *Salix Mosquitiana.*
§ *Arundo Bambos,* Linn.

fibrous substance: the whole stalk is strong and elastic, and is generally used for wattles in those countries where they cover their houses with tyles, or thatch. They are also used for baskets; but to prepare them for this purpose, they are obliged to split them into tender slips, and to pare off the inward more pithy part, leaving none but the outward rind and lignous fibres for use. The tops of the more tender shoots of this plant are frequently pickled in America, and very much liked; they eat very crisp and tender *. There are several species of this tree, some of them rising to the height of thirty feet, while others again, rise only a few feet from the ground. It is common on the banks of most of the rivers.

Mohoe †.—This tree is frequent by the sea side, and is also found at some distance up the several rivers, and grows very luxuriantly in many places. It rises commonly to the height of sixteen or eighteen feet, and throws out some large flowers, which generally appear of a yellow, or saffron colour. The bark of the tree is very tough, and not much inferior to either hemp, or flax, on many occasions; it is naturally white, and of a fine, soft, filamentous tex-

* Brown's Natural History of Jamaica, p. 138.

† *Althæa Racemosa*, Linn.

ture; which must, undoubtedly, render it extremely fit for the paper-mill *. The bark of it is woven into ropes, which are found to be little inferior to those made from hemp for strength and durability.

At Honduras, the body of this tree is usually converted into rafts to float the logwood down to the sea †. All the parts of the tree, especially the flowers, abound with a fine mucilage, and are both emollient and laxative. There are several species of this tree.

CAOUTCHOUC ‡, or Elastic Gum, from which the well known material of Indian rubber is made, is abundantly found in most places, and is a considerable article of barter between the native Indians who collect it and the traders. The Mexicans call it *olli*, and the Spaniards *ule*. Besides its use for removing the marks of black-lead from paper, &c. it is employed in the construction of various surgical instruments; it is also of use to chemists, as a material for flexible tubes to gazometers and other apparatus; a mixture of volatile oil and alcohol will dissolve it, and it thus forms a good varnish. And finally, it enters as an essential ingredient into the composition of the best varnish for balloons.

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* Brown's Natural History of Jamaica, p. 284.

† Henderson's Honduras, p. 110.

‡ *Hævea Caoutchouc.—Jatropha Elastica*, Linn.

The juice of it may also be used in making cloth of all kinds, boots, shoes, gloves, &c. impenetrable to water; and there can be no doubt, but that it might be applied to a vast variety of important purposes. From the bark of the tree when wounded, there flows a milky juice, which by exposure to the air, in a short time turns black, and is converted into caoutchouc. The American caoutchouc, is usually brought to Europe in the form of globular narrow necked bottles, about a fourth of an inch thick, and capable of holding from half a pint to a quart, or more. They are formed upon moulds of unburnt clay, pieces of which are often found adhering to the inside. At Cayenne, it is said to be used for torches, on account of its inflammability.

Locust Tree *.—This is a large spreading tree, with a thick stem, and covered with a russet bark. It grows to a very considerable size, and is looked upon as an excellent timber-tree; but it must be very old before it is cut, otherwise the heart will be but small. The flowers are of a yellow colour, striped with purple, and hang in loose panicles, at the end of the branches. The pods are fleshy, brown, shaped like the common garden bean, about six inches long, and half as broad, of a purplish brown colour, and woody consistence, each con-

* *Hymenæa Courbaril*, Linn.

taining a few seeds separated by transverse partitions, and inclosed in a whitish substance, intermixed with filaments, as sweet as honey, which is eaten by the Indians with great avidity. Between the principal roots of the tree exudes a fine transparent resin, yellowish or red, which is the *Gum Anime* of the shops. This is the finest varnish known, when dissolved in rectified spirits of wine: it is also used in perfumes, and in medicine, externally. It has been remarked, that the wild-bees are very fond of building their nests in the branches of this tree. Its wood is in great request for wheel-work in the sugar-mills, particularly for cogs to the wheels, being extremely hard and tough, as well as capable of a fine polish. It is so heavy that a cubic foot of it weighs about a quarter of a hundred weight.

Pole-Wood.—This tree is found in great abundance in the vicinity of Black River, and is said to be excellent for making shafts and wheels for chaises.

Braziletto *.—This tree grows in a dry and rocky soil; it is an excellent timber-wood, but seldom exceeds eight or ten inches in diameter in the

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* *Cæsalpinia*, Linn.

most perfect state. The wood is elastic, tough, and durable; and bears a fine polish: it is of a beautiful orange colour, full of resin, and yields a fine full tincture by infusion *.

DRAGON'S-BLOOD-TREE †.—This tree rises to about the height of thirty feet, and is a native of the interior of the country: the flowers are of a yellow colour; and it yields a red pellucid resin, called *Dragon's Blood* ‡, which had formerly the reputation of stopping hæmorrhages, but it is now out of use. This substance is a blood-red resin, and the best sort is the exsudations from the tree, in the shape of oval drops. This resin, when finely pulverised, becomes a fine crimson. It is totally insoluble in water, insipid and without smell when cold, but if heated, it gives a fragrant odour like benzoin: a solution of it in alcohol serves to stain marble of a beautiful and permanent red colour; it is also employed in staining leather and wood; as also in lacquering and varnishing, and for similar uses; and is so much valued by artists, that the finest samples bear a pretty high price.

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* Long's History of Jamaica, p. 227.

† *Pterocarpus Draco*, Linn.

‡ Sanguis Draconis.

Cocoa Nut *.—This tree is planted in most parts of America, both for its beauty and productions: this is the common inhabitant of almost every situation within the tropics; and in this country, both on the continent and different islands, is most abundant: it grows generally in the low lands, and is from forty to sixty feet high, of a moderate thickness in proportion to its height, straight, naked, marked with the scars of fallen leaves. It bears all its foliage at the top, like the rest of the kind. This consists of many strong ribs, furnished with long narrow leaves folded lengthways, which rise in a continued series on both sides, and spreads very evenly both ways. These ribs shoot gradually from the top; and as the younger ones stretch out sufficiently to raise the sap; the lower ones decline, wither away gradually, and fall off in time. The flowers are of a yellowish white. The nut or shell is formed of a hard compact substance, and filled with a sweetish water, while young; but as the fruit advances in its growth, this deposites a soft gelatinous crust upon the sides of the shell, which hardens gradually with age, until at length it acquires a strong concreted texture; and then it is not unlike the substance of an almond, either in taste, or consistence. This kernel in some plants is near an inch

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* *Palma Indica Nucifera.*

thick, enclosing about a pint of sweet, delicate, wholesome refreshing liquor, which is looked upon as one of the greatest dainties in America. Its trunk is made into boats, rafters, the frames of houses, and gutters to convey water. The leaves are used for thatching buildings, and are wrought into mats, baskets, and many other things for which osiers are employed in Europe. The fibrous coat or husk of the shell, after being soaked in water, is beaten into oakum, spun into a variety of yarns, woven into sail-cloth, and twisted into ropes and cables even for the largest ships; for these purposes it is preferable to hemp on account of its greater durability. The woody shell itself, or nut which encloses the kernel, is polished and formed into goblets, powder boxes, and various kinds of cups. The kernels, pressed in a mill, yield an oil, which when fresh, is equal in goodness to the oil of sweet almonds; it is said to become soon rancid, and is then employed by painters. It is also much used in South America for burning in their lamps, and has lately become an article of exportation. If the body of the tree be bored, there exudes from the wound a white, sweet liquor, which is collected by the natives in pots; the liquor thus procured is called *palm-wine*, and is a favourite beverage in the country. It is very sweet when fresh; kept a few hours, it becomes more poignant and agreeable; but the next day it begins to grow sour, and in the space of

twenty-four hours is complete vinegar. The juice thus obtained, upon being mixed and fermented with molasses, affords a very pleasant wholesome spirit, which differs but very little from arrack. The tender leaves, before they fully expand, are sometimes eaten in place of cabbage, and other culinary greens; but as this luxury can be obtained only by the destruction of so valuable a tree, it is generally thought too expensive a treat, except in those parts of the country where the plantations are numerous. The kernels of the nuts when broken are much used, and esteemed excellent for fattening hogs. The tree is propagated by planting the nuts.

Silk Cotton Tree *, or *Ceiba*, grows generally in the low lands, and rises to the height of eighty, or an hundred feet, and sometimes even more, by a straight and well proportioned stem. When in bloom it is one of the most splendid productions of nature. At such season it is entirely crowned with a profusion of brilliant flowers of rich and variegated hues, of which the colour of the carnation is the most predominant. This bloom is suddenly succeeded by a multitude of small pods which contain the cotton, and that burst when sufficiently ripe. The crop of cotton it affords is said to be triennial. The trunk of this tree is much used in the building of canoes

* *Bombax Ceiba*, Lynn.

and small vessels *. Some of them simply rendered concave, have been known to produce a boat capable of containing one hundred persons †.

ZEBRA, or *Palmeratta-wood*, also abounds in this country ‡. It is much esteemed in Europe, for making ornamental furniture. There is likewise found here, two other trees of nearly the same kind, but I am unable to give any description of them; these are the *Sabah*, and *Malata-wood*.

WILD FIG-TREE §.—This monstrous tree is, at first, but a weakly climbing plant that raises itself by the help of some adjoining trunk, rock or tree; and continues to shoot some slender flexile radicles, or appendixes, that embrace the supporter, and grows gradually downwards, as the stem increases: this at length gains the summit, and begins to shoot both branches and radicles or appendixes more luxuriantly; these in time reach the ground, throw out many smaller arms, take root, and become so many stems and supporters to the parent plant; which now begins to enlarge, to throw out new branches and appendixes, and to form a trunk from the summit of its supporter; which still continues in the

* Henderson's Honduras, p. 114.
† Edward's History of the West Indies, vol. 1st, p. 21.
‡ Wright's Memoir, p. 15.
§ *Ficus Indica.*

centre of the first radicles, interwoven in their descent, and at length augmented and connected gradually into a common mass or body about the borrowed foundation; which (if a vegetable) soon begins to decay, and at length is wholly lost within the luxuriant trunk it supported *. This monarch of the wood, whose empire extends over Asia and Africa, as well as the tropical parts of America, is described by our divine poet with great exactness.

" The fig-tree, not that kind for fruit renown'd,
But such as at this day to Indians known
In Malabar and Decan, spreads her arms,
Branching so broad and long, that in the ground
The bearded twigs take root, and daughters grow
Above the mother tree, *a pillar'd shade,*
High over-arched, and echoing walks between!"

PARADISE LOST, BOOK IX.

ROSE WOOD †.—This tree grows to a considerable size, and is considered as one of the most valuable timber trees, but it is not common. The wood is white, and of a curled grain when young, but grows of a dirty clouded ash-colour with age: it bears an excellent polish, and has a fine smell. The younger trees, in Jamaica, are frequently cut for firewood in the mountains; they are full of resin, burn very freely,

* Brown's Natural History of Jamaica, p. 110.

† *Amyris Balsimifera*, Lynn.

and with a most agreeable smell. The wood is heavy, and in great vogue among the cabinet-makers. All the parts of this tree are full of warm aromatic particles, and may be used in baths and fomentations; the berries are oblong, and have the taste of the Balsam of Copaiba. An infusion of the leaves has a pleasant flavour, is highly cephalic, strengthens the nerves, and is particularly restorative to weak eyes. In Jamaica there are several species of *Amyris*, the leaves and bark of which yield a fine balsamic juice; and if the body were tapped at the proper season, a thick liquor would transude, resembling that of the Gilead Balsam, to which the taste of the bark and wood of the smaller branches bears a very exact relation. Dr Wright apprehends that this wood, by distillation, would yield a perfume equal to the oleum rhodii.

Nicaragua-Wood *, is a kind of dye-wood of a very bright red colour; it grows in great abundance in the neighbouring province of Nicaragua, from whence it derives its name, and is also said to be abundant, about the banks of the Bluefield River, or *Rio de Nueva Segovia*.

Copal Tree †.—This tree produces the valuable

* *Cæsalpinia Nicaraguensis.*

† *Rhus Copallinum*, Linn.

gum resin, called *Copal*, and is a natural exsudation from the tree, which hardens in the air. It is very common in most parts of the Mosquito Shore, and is collected in large quantities by the natives for the purpose of barter with the foreign traders.

The best copal is a hard brittle resin, in rounded lumps of moderate size, easily reducible to fine powder, beautifully transparent, but often, like amber, containing parts of insects and other small extraneous bodies impacted in its substance. The colour of copal is a light lemon yellow, varying to orange; but when dissolved and thinly spread over any surface, the colour is scarcely perceptible, and it only gives a fine hard, smooth transparent glazing. It is this union of hardness and transparency, with want of colour, that renders copal so valuable as a varnish.

Capevi-Tree *, is a lofty and elegant tree, with a handsome head; the smaller branches zig-zag, with a nearly smooth, brownish ash-coloured bark. The leaves are about four inches long, and the flowers are white. This tree produces one of the most valuable and active medicines, called the *Balsam of Copaiba*: to procure it, several incisions, or sometimes auger holes are made near the ground, pene-

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* *Copaifera Officinalis*, Linn.

trating through the bark into the substance of the wood, when the balsam flows out in such abundance, that sometimes in three hours, twelve pounds have been obtained.

This balsam is colourless when flowing from the tree; after a while it becomes of an amber yellow, and considerably viscid, but retains its transparency; it is never known to become perfectly solid. The smell of capivi balsam is flagrant and powerful, and its medicinal virtues are held in high estimation.

Physic-Nut Tree *, or Physic-nut.—This plant is very common, and grows to the height of seven or eight feet, or better; but dies after a few years †. It is the property of this nut to act upon the human system either in the way of emetic or cathartic; or if it be required, powerfully as both; effects, which depend on the mode of its preparation, and which in all ways is intimately understood by the inhabitants. It is very generally considered one of the most efficacious antidotes to bile; and consequently must be deemed singularly valuable in a climate, where the disposition to such habit is so prevalent ‡.

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* *Jatropha*, Linn.

† Brown's Natural History of Jamaica, p. 348.

‡ Henderson's Honduras, p. 115.

LIME TREE *.—This is a bushy shrub, and very common in America and the West Indies, where it is often raised for the sake of its fruit, and not unfrequently planted for fences. When it grows luxuriantly, it is seldom under twelve or fourteen feet in height, and spreads greatly about the top; but it is often stunted, and of a smaller stature. The juice of the fruit is used, as a principal ingredient in punch: the most appropriated and agreeable liquor that can be used in any country, where the juices are overheated and in a ferment.

SWEET LIME TREE †.—This tree grows much like the foregoing; but it rises generally more upright, and bears a fruit which in size, as well as form, seems to hold a mean between the lime and the lemon. The juice is rather insipid, but nevertheless, is esteemed much more grateful than that of the lemon. It is from this tree that the perfume called *Bergamot* is obtained. As this oil exists pure in the peel, being simply deposited in small cells, the extraction is easy, either by expression or distillation. The former is the best, as the oil is not liable to be altered by heat; but more is produced by distillation than by expression; by this mode,

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* *Citrus Acris.*

† *Citrus.*

two ounces of the oil have been obtained from two pounds of the peel *.

Lemon Tree †.—The varieties of the lemon tree are numerous. The *St Helena Lemon-tree* has been introduced into Jamaica, where it is now cultivated by most people, on account of its large fruit; one of which, frequently yields above half a pint of juice ‡. Lemon juice is one of the sourest, and most agreeable of all the vegetable acids. It is procured simply by squeezing the fruit, and straining the juice through linen or any loose filter. This juice forms a considerable article of commerce, and is then called the *Citric Acid*, or *Acid of Lemons*. In the Mediterranean, it is obtained by peeling the fruit, slicing it, and putting it in a strong press with a cloth or hair strainer. The juice which comes out very turbid, is then placed for a day in a cool cellar, and then strained into jars with very narrow necks, which are then well cemented up. It may be preserved in these jars for a considerable length of time, by covering it with a thin stratum of oil. These presses are sometimes so large as to squeeze six thousand lemons at once. *Scheele* has

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* Mortimer's Commercial Dictionary.

† *Citrus Lemon.*

‡ Brown's Civil and Natural History of Jamaica, p. 308.

discovered a process for obtaining the pure *citric acid*, in the form of crystals, which is as follows: Saturate boiling lemon juice with chalk in powder, added gradually, till all effervescence ceases. A grey insoluble mass settles to the bottom, composed of the citric acid united with the lime, leaving the mucilage and other ingredients of the lemon juice in the supernatant liquor, which may be thrown away, and the citrat of lime is to be well washed with *cold* water, till the latter comes away colourless. Then add to the precipitate a quantity of sulphuric acid, equal to the weight of the chalk employed, but previously diluted with about ten parts of water. Boil the whole for a few minutes, and a change of composition takes place, the sulphuric acid engaging the lime, and the citric acid passing into the supernatant liquor. Strain off the latter, and evaporate it slowly to the consistence of a thick syrup, and by standing for some days, most of the citric acid will separate in large crystals. A small excess of sulphuric acid is requisite to enable the citric acid to crystallize; which otherwise, would only concrete into a gelatinous mass.

In preparing the citric acid in the great way, M. Dizé gives the following particulars: After the citrat of lime has been decomposed by the sulphuric acid, *cold* water, assisted by stirring, is sufficient to wash out all the citric acid adhering to the sulphat of lime, which should therefore be employed, and

these washings added to the filtered liquor. Much sulphat of lime, however, remains in the clear liquor, which, in fact, is a mixture of citric acid, sulphuric acid, and sulphat of lime, and is of a clear light yellow. It may be evaporated at a boiling heat, and as the bulk of fluid lessens, the sulphat of lime falls down, so that it is of use to suspend the evaporation once or twice for some hours, to give time for the sulphat of lime to separate, which should be removed. Towards the end of the evaporation the liquor becomes blackish, owing to the sulphuric acid remaining in it, becoming so concentrated as to act partly on the acid itself, and partly, as this chemist supposes, on a portion of the original extractive matter which accompanies the citric acid, in its combination with lime, and separation from it, and which appears to be the cause of the difficulty found in getting the whole of the acid to crystallize. This acid is so very soluble, that the evaporation must be pushed to a very thick syrupy consistence before it will crystallize. The crystals are at first black and dirty; by a second solution in cold water, of which a small quantity will suffice, filtration, and evaporation, the crystals are obtained yellow and more regular; but a third operation of the kind seems necessary to bring them to be perfectly transparent and colourless. As there is much waste in these operations, all the washings and

fouled parts should be reserved for subsequent purification.

SEVILLE ORANGE *, or SOUR ORANGE.—This species grows more bulky and upright, than that of the lime-tree, and the juice of its fruit is much milder. The rhind is much esteemed in bitters, and stomachic wines †.

CITRON-TREE ‡.—The fruit of this tree is oblong, with a very thick and succulent rhind, and makes a fine sweet meat. It is sometimes steeped in spirits; and to them, when distilled, it gives both an agreeable flavour, and its name. The bark of the citron is smoother, and the wood less knotty than that of the lemon. In their wild state, some of them are said to attain to the height of sixty feet.

CHINA ORANGE-TREE §, is a middle-sized tree, with a greenish brown bark, with moderately sized leaves; the fruit is sweet, with a smooth thin rhind. The orange-tree in general has an upright smooth trunk, divided upwards into a branchy regular head, and is generally about

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* *Citrus Aurantium*, Linn.

† Brown's Natural History of Jamaica, p. 308.

‡ *Citrus Tuberosa.*

§ *Citrus Aurantium.*

twelve or fifteen feet in height. It is said that the finest flavoured fruit is obtained by engrafting the China orange on a Seville orange stock. The flowers of the orange tree have been for a long time in great esteem as a perfume. They are highly odoriferous, and of a somewhat warm, and bitter taste. They yield their flavour by infusion to rectified spirit, and in distillation both to spirit and water. An oil distilled from the flowers is brought from Italy under the name of *oleum*, or *essentia neroli*.

Shaddock Tree *.—It is said to derive its name from a Captain Shaddock, who first brought it from the East to the West Indies: it is a middle-sized tree, and grows to a much greater height than any of the others; the leaves are egg shaped: the flowers white, and very odorous: the fruit is very large, being in general about eight inches in diameter, of a yellowish green colour, even surfaced, twelve celled or more, containing some a red, others a white pulp; the juice in some sweet, in others acid.

Forbidden Fruit †, or *Smaller Shaddock Tree*: this species also grows to a more considerable size than any of the others. The fruit of these two last

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* *Citrus Decumana*

† *Citrus.*

species, is agreeable to most palates, and of a pleasant grateful flavour; but the last excels in sweetness, while the other partakes a little of the bitter, which recommends it to most people.

Avocato, or *Alligator Pear Tree* *.—This tree grows commonly to the size of the largest apple trees in Europe, and spreads pretty wide at the top. The branches are very succulent and soft; the leaves oblong and veiny, and the fruit of the form of a pear; but the pulp is covered with a tough skinny coat, and contains a large rugged seed, which is wrapped up in one or two thin membranous covers. The fruit of this tree is one of those that is held in the greatest esteem; the pulp is of a pretty firm consistence, and has a delicate rich flavour, something resembling that of the Jerusalem artichoke. It is generally eaten with pepper and salt; and is sometimes called *Vegetable marrow*. The tree requires some care, a rich soil, and a warm situation, to raise it to perfection.

Tamarind Tree †.—The trunk of this tree is lofty, and of considerable thickness, crowned with wide extended branches, bearing bright green leaves: the fruit hangs pendulous like large beans. This

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* *Laurus Persea.*

† *Tamarindus Indica.* Linn.

tree is a sensitive in some degree, and closes up its leaves on the approach of cold, or moist and heavy air *. It is common in many parts of the country, but it is in the island of San Andres, where it is to be found in the greatest profusion and perfection. It is the seed pods of this tree which form and constitute the preserve called tamarinds, which is sold in the shops; and is of such a pulpy acid quality, as to be of great use in abating and quenching thirst, and in cooling and allaying excessive heat. Tamarinds are prepared for exportation at Jamaica, in the following manner; the pods are gathered when fully ripe, the fruit is taken out of them, cleared from the shelly fragments, and placed in layers in a cask; boiling syrup, just before it begins to granulate, is then poured in till the cask is filled. The syrup pervades every part down to the bottom, and when cool, the cask is headed for sale. A better mode of preserving this fruit is with sugar, well clarified with eggs, till a transparent syrup is formed, which produces a pleasant flavour †.

Guava Tree ‡.—This shrub rises generally from eight to twelve feet in height. It bears a round fruit of a moderate size, which is much esteemed among the natives: this, while immature, is astrin-

* Brown's Natural History of Jamaica, p. 125.

† Mortimer's Commercial Dictionary.

‡ *Psidium Guajavas.*

gent, like all the other parts of the tree; but when it ripens, it is rather laxative, and is then much used both in jellies and cream dishes. The wood is very tough, and generally used for bows in cattle yokes. The fruit mixed with sugar, Peruvian bark, and water; and left to ferment, makes a cooling and agreeable drink; and is much used in this way in the province of Socorro in New Grenada, where it was usually served up daily at the table of General MacGregor, when Commandant-General of this province, in the year 1813.

MANGENEEL TREE *.—This tree is very common in most parts of America; and is generally found in sandy watery places near the coast. This is a tall and spreading tree, of handsome appearance, compared by Jacquin to a pear-tree; it is full of an acrid milky juice, which is apt to blister and inflame the skin; nay, the dew or rain drops that fall from the leaves, is said to do the same. The fruit is of the size of a walnut without the coat, of a yellowish green, resembling a crab-apple in size and smell; the coat is very thin, and nut large. Brown says, "I "have known many people who have ignorantly "eaten of the fruit of this tree, which they had ta-"ken for crab apples: they generally vomited in a "short time, and continued to complain of a burn-

* *Hippomane Mancinella*, Linn.

" ing heat in the mouth, throat and stomach, for ma-
" ny hours after. The juice of the buds of the
" white cedar is esteemed an antidote to this poison,
" and is generally used with some success on these
" occasions; but oily mixtures, and emulsions, are
" the most effectual assistants, and seldom fail giv-
" ing relief soon *." The wood is of a beautiful grain, being variegated with several dark colours; it will take a fine polish, and last well: the wood-cutters, to guard against its corrosive juices, are obliged to make a fire round the body of every tree, some time before they can venture to fell them. It is with the juice of this tree that the Indians used to poison their arrows.

PIMENTO TREE †, is one of the most elegant productions in nature; and produces the fruit called *Allspice*, or *Jamaica Pepper*; a production which rivals the most valuable spices of the East, combining the flavour and properties of many of those spices; and forming (as its popular name denotes) an admirable substitute, and succedanium for them all ‡. The pimento trees grow spontaneously, and in great abundance, in many parts of Jamaica, but more particularly on hilly situations near the sea, on the northern side of that

* Brown's Natural History of Jamaica, p. 351.
† *Myrtus Pimenta*, Linn.
‡ Edward's History of the West Indies, vol. 2d, p. 369.

island. There is a species of pimento growing in Spanish America, whose berry is larger, weaker in its aroma, and consequently inferior in its quality to the West Indian. This tree is so entirely the child of nature, that not one attempt in fifty to propagate the young plants, or to raise them from the seeds, in parts of the country where it is not found growing spontaneously, has succeeded *. As a species of it is a native of Spanish America, and as the planting of it sometimes succeeds in Jamaica, I think it is deserving of a fair trial in the territory of Poyais, if only for the domestic use of the planter himself.

The usual method of forming a new pimento plantation, (in Jamaica it is called *a walk*) is nothing more than to appropriate a piece of wood land, in the neighbourhood of a plantation already existing, or in a country where the scattered trees are found in a native state, the woods of which being fallen, the trees are suffered to remain in the ground till they become rotten, and perish. In the course of twelve months after the first season, abundance of young pimento plants will be found growing vigorously in all parts of the land, being without doubt, produced from ripe berries scattered there by the birds, while the fallen trees, &c. afford them both

* Edward's History of the West Indies, vol. 2d, p. 870.

shelter and shade*. At the end of two years it will be proper to cleanse the land thoroughly, leaving such only of the pimento trees as have a good appearance; these will then soon form goves, which perhaps do not require much attention, after the first four or five years.

There is hardly in the vegetable creation, a tree of greater beauty than a young pimento. The trunk, which is of grey colour, smooth and shining, and entirely free from bark, rises to the height of fifteen or twenty feet. It then branches out on all sides, richly clothed with leaves of a deep green, which, in the months of July and August, are beautifully contrasted and relieved by an exuberance of white flowers. These leaves are equally fragrant with the fruit; and in distillation yield an odoriferous oil, which is very commonly used in the medicinal dispensaries of Europe, for oil of cloves †.

Soon after the trees are in blossom, the berries become fit for gathering, the fruit not being suffered to ripen on the tree, as the pulp in that state, is difficult to cure. It is impossible, however, to prevent some of the ripe berries from mixing with the rest; but if the proportion of them be great, the price of the commodity is considerably injured.

The berries that are fully ripe, lose the aromatic

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* Edward's History of the West Indies, vol. 2d, p. 370.

† Ibid, p. 371.

warmth for which they are so much esteemed, and acquire a taste perfectly resembling that of juniper berries, which renders them an agreeable food for the birds, the most industrious planters of these trees, which devouring them greedily, and muting the seeds, afterwards propagate these trees in the woods. Perhaps these ripe berries might be used with advantage in giving a flavour resembling *geneva*, to the spirit which is distilled from Indian corn.

It is gathered by the hand; and one labourer on the tree, employed in gathering the small branches, will give employment to three below (who are generally women and children) in picking the berries; an industrious picker will fill a bag of 70 lbs. in a day. It is then spread on a terrace, and exposed to the sun for about seven days, in the course of which it loses its green colour, and becomes of a reddish brown, and when perfectly dry it is fit for market.

In a favourable season, a single pimento tree has been known to yield 150 lbs. of the raw fruit, or one cwt. of the dried spice; for there is generally a loss of one-third in curing. A plenteous crop, however, occurs perhaps but once in five years; and the price in the British market fluctuates accordingly.

Some planters kiln-dry the pimento berries with great success, and it seems indeed a most eligible

method, where from abundance of the crop, dispatch and security against rain are essential. Pimento is usually imported in bags and casks. As there is so great an affinity between this spice, and the true clove, it has been proposed as worthy of trial, if the fruit, when first formed, or the flowers picked off the tree and dried, might not answer the same purpose as the Asiatic clove; the more odoriferous, and smaller the berries are, the better they are reckoned. The berries have a similarity in smell, and taste, to cloves, juniper berries, cinnamon, and pepper, or rather a peculiar mixture of somewhat a-kin to all of them, whence their name of *all-spice*.

The exports from Jamaica are about two millions of pounds annually. Of this quantity, no inconsiderable part is sold to the Dutch. The South Americans frequently mix pimento with their chocolate, and denominate it *guayavita*. If pimento be left, for some time, to soak in good brandy, it will yield, by distillation, an odoriferous spirit, which, by the addition of a proportionate quantity of sugar, may be converted into a most agreeable and highly stomatic cordial.

ANOTO *, called in commerce *Annatto*, as also *Nankeen* †; by the French, *Roucou*, and the Spa-

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* *Bixa Orellana*, Linn.

† Mortimer's Commercial Dictionary.

niards, *Achote*. It is procured from the pulp of the seed-capsules of the shrub, which grows seven or eight feet high, and produces oblong hairy pods, somewhat resembling those of a chesnut. Within these are thirty or forty irregular figured seeds, which are enveloped in a pulp of a bright red colour, and unpleasant smell, in appearance like the sort of paint called red lead, when mixed up with oil; and as paint was used by some tribes of the Indians, in the same manner as woad by the ancient Britons*. This shrub rises with an upright stem to the height of eight or ten feet, sending out many branches at top, which form a regular head. These are garnished with heart-shaped leaves, ending in a point, which have long foot-stalks, and come out without any order. The flowers are produced in loose panicles at the end of the branches, of a pale peach colour, having large petals. It is a native of South America and the East and West Indies.

The method of preparing the anoto for market is very simple, and is as follows. The seeds, together with the red tough matter that surrounds them, are softened in a wooden trough with water, until, by a kind of fermentation, which spreads a very nauseous smell, and by diligent stirring and pounding, the kernels are separated from the pulp. This mass is then strained through a sieve and boiled; upon

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* Edward's History of the West Indies, vol. 2d, p. 366.

which a thick reddish scum, which is the pigment, separates. When skimmed off, it is carefully inspissated in another kettle; and after being completely cool, is moulded in roundish lumps, wrapt round with leaves of trees, and packed for sale. This drug is preferred by the dyers to indigo, and sold one-fourth dearer. The double Glouster cheese is coloured with this dye, and some of the Dutch farmers use it to give a rich colour to their butter, and great quantities are said to be applied to the same purpose in the English dairies. The poor people use it instead of saffron; and in South America, it is frequently mixed in all their dishes, as well as in the composition of chocolate, to which it gives (in their opinion) an elegant tincture, and great medicinal virtues. The liquid sold in London by the name of "Scott's nankeen dye," is said to be annatto, dissolved in water by means of potash*. Labat informs us, that the Indians prepare a dye of this sort much superior to that which is brought to Europe; of a bright shining red colour, almost equal to carmine. For this purpose, instead of steeping and fermenting the seeds in water, they rub them with their hands, previously dipt in oil, till the pellicles come off and are reduced into a clear paste, which is scraped off from the hands with a knife, and laid on a clean leaf in the shade to dry.

* Bancroft's Philosophy of Colours.

Coco Plum-Tree *, is an irregular shrub, growing from seven to ten feet high, with a brown or russet bark, besprinkled with whitish minute spots. The leaves are about two inches long, and one and a half broad: the flowers are small and whitish, a little villous or cottony on the outside, and without smell: the fruit is about the size of a damascene plumb; of these some are black, some white; but no essential difference appears in the shrubs that bear them. The fruit is insipid, and contains a large nut, marked with five longitudinal furrows: it incloses a single kernel of a very pleasant flavour; which makes up abundantly for the insipidity of the pulp; and for which it probably had been so much esteemed by the native *Indians* †. When planted in situations not far remote from the sea, it continues in flower almost the whole year, but generally ripens its fruit in June and December. When planted in a dry sunny soil, the fruit remains always a dry *drupa*; the nut being covered only by a thin skin or bark. Its root passes for an astringent, and has been employed as such in medicine. This shrub is very common in the island of San Andres, and gives name to a bay on the east side of the island.

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* *Chrysobalanus Icaco*, Linn.

† Brown's Natural History of Jamaica, p. 250.

PLANTANE TREE *.—This plant, of which there are several varieties, as the *Banana* †, *Dominica*, &c. is cultivated with great care in all the tropical regions, where the fruit supplies the place of bread. It thrives best in a cool, rich, and moist soil; and is commonly planted in regular walks or fields: it is propagated by the shoots, and planted at convenient distances from each other; but as the root throws up a number of young layers every year, the spaces between the first plants are left pretty considerable. The trunk or stem of this tree is made up of a small spungy heart, covered with the thick fibrous vaginæ formed by the foot-stalks of the leaves, unfolding each other as they recede from the centre. But the heart, at length, shoots above the foliage, and throws out a large flower-spike, adorned with a great number of blossoms, joined in clusters, and inclosed in their several *spathæ*, which are afterwards succeeded by so many distinct oblong berries, resembling a large cucumber, with a smooth skin, of a light green colour, and when perfectly ripe, turns to a deep yellow. When these are ripe and fall, or are taken off, the stem decays gradually, and the root begins throw up young shoots, by which the kind is in renewed; but lest the growth of these should

* *Musa Paradisiaca*, Linn.
† *Musa Sapientum*, Linn.

be retarded by the exhalations of the old stalk, it is usually cut down near the root, when the fruit is taken off, which gives a stronger and quicker growth to the new plants. Their fruiting in the South Sea Islands, is said to be promoted by the use of lime and wood-ashes.

The fruit is used, not only when full grown, but before it ripens: it is commonly peeled, and afterwards roasted in its skin; many persons prefer them to any other kind of bread, especially when young and tender. As the fruit ripens, it becomes soft and sweetish, and is then frequently made into tarts, or sliced and fryed with butter, and thus served up in plates.

The juice of the tree is a very rough astringent; but its cooling leaves are generally used to dress blisters in those parts of the world: and when dried, are made into mats of different sorts, or frequently employed to stuff matresses *.

Aloe Plant †.—The most valuable species of aloes is that of the island of Socotra in the East Indies; the introduction of which to the West Indies, has hitherto been unaccountably neglected. The species called the *hepatic*, is the only sort known to the planters there; and the cultivation of which,

* Browne's Civil and Natural History of Jamaica, p. 363.
† *Aloe.*

is principally confined to the island of Barbadoes. It is propagated by suckers, and will thrive in soils the most dry and barren *.

It is procured in Jamaica in the following manner:—The labourers go into the fields with tubs and knives, and cut off the largest and most succulent leaves close to the stalk: these they put into the tubs in an upright position, that the loose liquor may be drained from the wound. When this is almost wholly discharged, the leaves are taken out singly, and cleared of any juice that may adhere to them; and the liquor is put into shallow flat-bottomed vessels, and dried gradually in the sun, till it acquires a proper consistence †.

Another method is described by Mr Edwards, which is as follows:—The plant is pulled up by the roots, and carefully cleansed from the earth, or other impurities. It is then sliced, and cut in pieces, into small hand-baskets or nets. These nets or baskets are put into large iron boilers or cauldrons, with water, and boiled for ten minutes, when they are taken out, and fresh parcels supplied, till the liquor is strong and black. At this period, the liquor is thrown through a strainer into a deep vat, narrow at bottom, where it is left to cool, and to deposit its feculent parts. Next day the clear liquor is

* Edwards' History of the West Indies, vol. 2d, p. 368.

† Dr Browne's Natural History of Jamaica, p. 198.

drawn off by a cock, and again committed to the large iron vessel. At first it is boiled briskly, but towards the end the evaporation is slow, and requires constant stirring to prevent burning. When it becomes of the consistence of honey, it is poured into gourds, or calabashes, for sale, and hardens by age.

A species of this plant, the *Agave*, is common in all the warm regions of America; Linneus has separated this genus from the aloe. It is a plant highly esteemed by the Indians, who make ropes and various kinds of cloth from the leaves, as also a kind of shoe or sandal, called *apargate*. The fibres of the leaves, separated by bruising and steeping in water, and afterwards beating them, will make a thread for common uses. It also affords an excellent soap, fit for all the purposes of the laundress *.

Chaw Stick †.—The bark of this plant is of a pleasant bitter taste, and raises a great fermentation in the *saliva* ‡. This is the common dentrifice of the aborigines, from whom the use of it has been learned; and for preserving the teeth pure and delicately white, this simple application perhaps exceeds all others. With the natives any appearance of decay in this respect very rarely occurs §.

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* Introduction to Jeffery's West India Atlas, p. 19.

† *Rhamnus Gouania.*

‡ Browne's Natural History of Jamaica, p. 173.

§ Henderson's Honduras, p. 117.

PALMA CHRISTI *.—This plant has brown stalks that divide into two or three branches, and rises to the height of six or seven feet: the leaves are of a deep green on both sides, and are unequally serrate; the stem is thick jointed, and of a purplish red colour upwards. The seed of this plant, is a whitish kernel enclosed in a brown acrid husk. These seeds contain a large quantity of a mild nearly insipid oil, which from a third to a fourth of the weight may be extracted, and is the common *Castor Oil* † of the shops. The oil is prepared in two different ways, either by simple expression, without previous preparation, or by decoction. For the latter method, the nuts are beaten in deep wooden mortars, and thrown into iron boilers filled with water, and slowly brought to a boiling heat with constant stirring. The oil rises as a scum to the top, which is simply strained and bottled. According to Dr Wright ‡, the oil thus prepared is much milder than that obtained by pressure, on account of the mucilaginous and acrid part which the compression forces out of the nut and mixes with the oil. Genuine castor oil is very thick and viscid, of a light amber or straw
ith scarcely any smell or taste. It becomes
y transparent by subsidence, and a quan-

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inus Communis, Linn.
ini.
rnal, 1787.

tity of mucilage falls slowly to the bottom of the vessel *.

ARROW ROOT †.—It has a stalk and leaf exactly like the plant called Indian Shot ‡; but the flower differs; that of the latter being a beautiful scarlet, and that of the former milk white: the plant grows from a thick fleshy root, and shoots by a simple foliated stalk to the height of two or three feet, and terminates in a loose and somewhat branched flower-spike. It was called *Indian Arrow Root*, the juice of the root being reputed a remedy for wounds inflicted with poisoned arrows, as well as against the stings of venomous insects. It is mealy, but may be kept perfectly sound for many years, as no insect will meddle with it. The root washed, pounded fine, and bleached, makes a fine powder and starch: It has sometimes been used as food, when other provisions were scarce, and is frequently administered in infusions to the sick.

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* Ree's New Cyclopædia, vol. vi. part 2d.

† *Maranta Arundinacea*, Linn.

‡ This plant commonly rises about four feet from the ground, and is furnished with large oval leaves near the bottom: the top shoots into a simple flower-spike, and is adorned with red blossoms, which are succeeded by pretty large oval and echinated capsulæ containing large round seeds, from the size and form of which it derives its present appellation.—*Browne*.

CASSAVA *.—This plant, which formerly supplied the greatest part of the sustenance of the native *Indians*, who called it *Manihot*, is now raised in most parts of America. The Spaniards call the plant *Yucca*, and the bread made from its root *Casada*. It is a very beneficial vegetable, and yields an agreeable wholesome food; and this, with its easy growth, and hardy nature, recommends it everywhere. It shoots from a tough branched lignous root, whose slender collateral fibres swell into those fleshy conic masses for which the plant is cultivated; and rises by a slender woody knotted stalk, to the height of four, five, or six feet, sometimes more. It thrives best in a free mixt soil, is propagated by the bud or gem, and generally cultivated in the following manner.

The ground laid out for the culture of this plant is first cleared, and howed up into shallow holes, of about ten or twelve inches square, and seldom above three or four inches in depth. A sufficient number of full grown stems are then provided, and cut into short pieces, of about six or seven inches in length, as far as they are found to be tough and lignous, and well furnished with prominent, well grown, hardy buds: of these one or two are laid in every hole, and covered over with mould, from the adjoin-

* *Jatropha Mandihoca.*

ing bank; but care must be taken to keep the ground clean until the plants rise to a sufficient height to cover the mould and prevent the growth of all weaker weeds. The plant grows to perfection in about eight months; but the roots will remain for a considerable time, uninjured in the ground, though the want of plants, or stormy weather, should oblige the cutting of the stalks. The roots are commonly dug up as occasion requires, and prepared for use in the following manner, viz. Being first well washed and scraped, then rubbed to a pulpy *farine* on iron-graters, they are put into strong linen, or palmetto bags, and placed in presses, until the juice is entirely expressed. The presses generally used on this occasion, are both cheap and effectual; they are contrived by placing one or more large flat stones near the root of some convenient tree, in the side of which they cut a hole or notch about the height of the stones; and into this they fix the end of a strong plank, which is stretched over the flat stones on which the *Cassava* bags are set; placing as many weights as the strength of the board will bear, or may be requisite to express the juice, on the other end. The *farine* being taken out and spread in the sun for some time, is pounded in large wooden mortars, then run through coarse sieves, and afterwards baked on convenient irons, similar to those used for toasting oaten cakes in Scotland. These

are placed upon the fire, and when hot, strewed with the sifted meal to whatever size or thickness people please to have their cakes made; this agglutinates as it heats, grows gradually harder, and when thoroughly baked, is a wholesome well-tasted bread.

The juice of the root is sweetish, but more or less of a deleterious nature, both fresh and in the putrid state; though it hardly retains any thing of this quality while it ferments. What is expressed from the *farine* is frequently preserved by some people, and prepared for many economic uses: in the boiling it throws up a thick viscid scum, which is always thrown away; and the remaining fluid (being found by long experience to be both wholesome and agreeable) is sometimes diluted and kept for common drink, and it is thought to resemble whey very much in that state. Some use it in sauces for all sorts of fish as well as many other kinds of food; purposes for which it was known to be employed among the native Indians, long before any *European* had landed in those parts of the world *.

VANGLO, or OIL PLANT †.—It was first introduced into Jamaica by the *Hebrews*, where it is now cultivated in most parts of the island: the seeds are

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* Browne's History of Jamaica, p. 349.

† *Sesamum*, Linn.

frequently used in broths by Europeans, but the *Hebrews* make them into cakes. The plant is in great esteem among many of the Oriental nations, who look upon the seeds as a hearty wholesome food; and express an oil from them, that is not unlike, or inferior to the oil of almonds. The *Sesamum* plant is cultivated in *Carolina* with great success; and it is computed there, that nine pounds of this seed yields upwards of two pounds of neat oil, which they find to grow more mellow and agreeable with age; and to continue without any rancid smell, or taste, for many years *.

ERYNGO †, or FITTWEED.—This plant rises from a thick proportioned root, and spreads a good many leaves about the crown, before it throws up a stalk; but as the season advances, it shoots into a branched stem, which generally rises to the height of one or two feet above the ground, and bears all its flowers in roundish radiated heads ‡. The seeds of this plant bruised and taken internally, are considered an infallible remedy for the bite of the most venomous snake. The root is attenuant and deobstruent, and is therefore esteemed a good hepatic, uterine, and nephritic. Its whole virtue, it is to be observed, consists in the external or cortical part.

* Browne's History of Jamaica, p. 270.

† *Eryngium.*

‡ Browne's History of Jamaica, p. 185.

Tomato *.—There are several species; and the berries are often used in soups and sauces, to which they give a very agreeable and grateful flavour: they are sometimes roasted, and then chiefly used with mutton: they are also fried with eggs, and served up in single plates. In Spanish America, they are much used, particularly in making omelets. This fruit is supposed to possess a stimulating, or aphrodisac property. The Hebrews in the West Indies, make use of this fruit in almost all their dishes. The flowers in these plants grow chiefly on common footstalks, and are seldom above seven or eight feet together: they are disposed in an alternate and distich order, and grow commonly at some distance from the alæ of the leaves †.

Guinea Pepper ‡.—All the species of the *Capsicum* or *Indian* pepper (as it is called in America) have the same general qualities, which are sensible in every part of the plant. The fruit is much used for culinary purposes, and has long since been introduced into Europe as a poignant ingredient in soups and high seasoned dishes, under the name of *Cayenne* pepper. This pepper derives its name from the island of *Cayenne*, in South America, of which it is a native.

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* *Solanum Lycopersicum*, Linn.

† Browne's History of Jamaica, p. 175.

‡ *Capsicum.*

The species from which the *Cayenne* is made, is called *Bird Pepper*; it grows in small tufted bushes, and seldom rises above three feet from the ground: but when it meets with a support, shoots to a moderate height; and in shady places, is frequently observed to rise many feet from the root. The capsulæ and seeds of these plants are full of a warm acrid oil, and generally prove an agreeable seasoning with these sorts of food that require a gentle stimulus to promote the proper digestion; and indeed, such a stimulus becomes more generally requisite in those warm countries, where a more free and constant perspiration seldom fails to produce a weakness and langour in the bowels. They are used by most people in these colonies, and always observed to give an appetite, to help digestion, to promote the tonic motion of the viscera; and in more robust habits, is sometimes observed to purge with a heat and tension about the podex. In the West Indies, there is a mixture made, and called *Mandram*, in which a great deal of this is employed, and which seldom fails to promote an appetite in the most languid stomachs. The ingredients are sliced cucumbers, eschalots or onions cut very small, a little lime-juice, and *Madeira* wine, with a few pods of bird or other pepper well mashed, and mixed with the liquor *.

* Browne's History of Jamaica, p. 177.

The fruit of the *capsicum bacatum* gathered when ripe, dried in the sun, and then pounded and mixed with salt, is kept stopt in bottles, and known in the West Indies by the name of Cayenne butter. Pepper-pot, according to Miller, is made of the same species, or of that variety of it, called *minimum*. For this purpose the ripe fruit is first dried in the sun, then put into an earthen or stone pot, with a layer of flour between each layer of the fruit, and baked in an oven till it is perfectly dried. It is then cleaned from the flour, and beaten or ground to fine powder. To every ounce of this powder, a pound of wheat flour is added, and the mixture made into small cakes with leaven: these are baked, cut into small pieces, and baked again till they are as hard as biscuit, then beaten into powder and sifted. The result is the well known Cayenne pepper.

VANILLA *.—This plant is a climber, and rises with great ease, to the tops of the tallest trees. The stalk is moderately slender, and throws out a long winding tendril opposite to each of the lower leaves, by which it sticks and holds to the branches, or bark of the tree: but after it gains the top, these become useless, and the place of each is supplied by a fellow leaf. It is a parisitic plant, the leaves of which greatly resemble the vine, and are about

* *Myrobroma.—Epidendrum vanilla,* Linn.

eighteen inches long, and three inches broad. The flowers are of a white colour, intermixed with stripes of red and yellow. When these fall off they are quickly succeeded by the pods, which grow in pairs, and are generally of the thickness of a child's finger; they are green at first, grow yellowish afterwards, and turn of a brownish cast as they ripen.

The sort which is manufactured, grows not only in the Bay of Campeachy, but also at Carthagena, at the Caracas, Honduras, Darien, and Cayan, at all which places the fruit is gathered and preserved; but it is rarely found in any of the English settlements, if we except Jamaica, though it might easily be propagated in them; for the shoots are so full of juice, that they will continue fresh, out of the ground, for several months.

When these plants are intended for propagation, nothing more is required than to make cuttings of three or four joints in length, which should be planted in low warm lands, along walls, or at the foot of trees, or other props, whereby it may be supported.

The method used to preserve the fruit, is when it turns of a yellow colour, and begins to open, to gather it, and lay it in small heaps to ferment two or three days, in the same manner as is practised for the cocoa pods: care should be taken not to allow the pods to remain upon the stalks too long, as they then transude a black fragrant balsam, which carries off both the smell and delicacy of the seeds, for

which alone the plant is cultivated. They are afterwards spread in the sun to dry, and when they are about half dried, they flat them with their hands, and afterwards rub them over with the oil of *Palma Christi*, or of the *Cocoa;* then they expose them to the sun again to dry, and afterwards they rub them over with oil a second time; then they put them in small bundles, covering them with the leaves of the Indian reed to preserve them. These plants produce but one crop of fruit in a year, which is commonly ripe in May, and fit for gathering, for they do not let them remain on the plants to be perfectly mature. The *Spaniards*, *French*, and *Italians*, mix them in their chocolate, to which they are thought to give both a delicate smell and an agreeable flavour. They are generally looked upon as a cooling cordial, a stomachic, and a good nervous medicine; and are sometimes used to perfume snuffs, and many other substances.

Cowhage *, is the celebrated *Cow-itch*, or *Cowhage*, and is much used in this country as a powerful vermifuge †. It bears long magnificent clusters of violet coloured flowers. The legumes are densely clothed with rigid very pungent barbed bristles, causing intolerable itching in the skin, but swallow-

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* *Dolichos Pruriens*, Linn.

† Henderson's Honduras, p. 116.

ed with safety, in the form of a bolus, into the stomach, where they act mechanically, so as to destroy all kinds of worms. This medicine may be given with great safety in all constitutions, as it produces no sensible disturbance; and as a proof that its action is merely mechanical, it may be added, that neither the tincture nor decoction of this plant has any perceptible effect whatever on the constitution *.

Snake Okro †, or as it is sometimes called *Vegetable Musk*, is very plentiful. The seeds of this plant when grown to full maturity, have a strong and perfect smell of musk; a few grains being sufficient to perfume a whole room ‡. The seeds of this contain an highly aromatic oil, and which when bruised and taken internally, are believed to be an infallible remedy for the bite of the most venomous snake. An application to the wounded part, in the way of poultice, of the same kind, is likewise recommended. § It may also be used with great propriety, instead of musk, in powders, pomatums, &c.

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* Rees's Cyclopedia, vol. 12, p. 1.

† *Hibiscus Abelmoschus*, Linn.

‡ Browne's Natural History of Jamaica, p. 285.

§ Henderson's Honduras, p. 116.

Okro *.—The pods of this shrubby plant are full of nutritive mucilage; and is the principal ingredient in most of the soups and pepper-pots, made in America. They are generally boiled separately, and added just before these messes are taken off the fire: but the seeds may be boiled in broth, like barley or any other ingredient; for they are not so mucilaginous. The pods boiled and buttered, make a rich plate; but are seldom used in this way, except in private families †.

Contrayerva ‡.—This plant is a climber, and rises frequently to a considerable height among the neighbouring trees and bushes. The root has a strong smell, and is deservedly looked upon as a warm attenuant and an active diaphoretic and stomachic; it is administered in infusions, and greatly used among the slaves in Jamaica §. Another species || is found in almost every spot about Balize, in the Bay of Honduras. A preparation from the root of this is known to produce abortion, and is much used for such purposes by negro females ¶. The

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* *Hibiscus.*

† Browne's History of Jamaica, p. 285.

‡ *Aristolochia Phetruome.*

§ Browne's Natural History of Jamaica, p. 250.

|| *Dorstenia Contrayerva*, Linn.

¶ Henderson's Honduras, p. 117.

root is about half an inch thick, full of knots, hard, and of a reddish colour. Long tough slender fibres shoot out from all sides of it; these are sometimes loaded with knotty excrescences: it is of a pale colour within, of an astringent taste, bitterish, with a light and sweetish kind of acrimony, and has a peculiar kind of aromatic smell. It was formerly much used in medicine, but is now almost neglected.

Foxglove*.—This plant is found about the high lands in the bay of Honduras. It derives its botanical name from *digitale*, the finger of a glove. Considerable attention is required in the selection and preparation of this plant for medical use. The leaves are to be gathered when the flower stems are shot up, but before the time of flowering; and the largest and deepest coloured leaves are preferable. These are to be carefully dried, and when completely crisp and dry, they are to be reduced to powder, and kept in bottles closely corked, and not exposed to the light.

Sarsaparilla†.—This plant delights in low moist grounds, and near the banks of rivers. The roots run superficially under the surface of the ground.

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* *Digitalis*, Linn.

† *Smilax Medicinal*, Linn.

The gatherers have only to loosen the soil a little, and to draw out the long fibres with a wooden hook. In this manner, they proceed till the whole root is got out. It is then cleared of the mud, dried, and made into bundles. The flower of this plant is yellow, mixed with red. The fruit is a black berry, containing several brown seeds. Its root, which is the part in use, divides itself into a great number of filaments, three or four feet long, of the thickness of a quill; it is brownish outside, and white within, only marked with two red streaks. It is inoderous, and has a mucilaginous very slightly bitter taste.

Sarsaparilla, which is demulcent, and said to be diuretic, was first brought into Europe by the Spaniards, about the year 1530, with the character of a specific for the cure of the lues venerea, which made its appearance a little before that time. The method of preparing it by the Spaniards and Indians of South America is as follows; they macerate an ounce of the root in almost four pints of water, for twenty-four hours, and boil it away to one-half. They give of the expressed decoction half a pint twice a-day, four hours before their meals, in bed, covered with clothes, where they sweat two hours, mixing a sufficient quantity of the fine powder of the root with each dose of the decoction. They purge them every tenth day. The reputation of this medicine declined after its introduction into Europe; though it appears from experience, that

in many cases, strong decoctions of it drank plentifully, and duly continued, are of very considerable service for promoting perspiration, and sweetening or purifying the blood and humours. Dr William Hunter and Sir W. Fordyce revived its reputation*. This plant is obtained in the greatest abundance in all parts of the Mosquito Shore; and in 1769, the British settlers exported from hence 200,000 lbs. of sarsaparilla †.

IPECACUANHA ‡.—There are several sorts of this plant found here. The bark of ipecacuanha is said to be preferable to its root, as an emetic; acting equally well, and with equal safety, in a smaller dose, either in powder, or infusion. The *ipecacuanæ radix*, is a little wrinkled root about the thickness of a quill. The celebrated Mutiz recommends the use of this root, as a sovereign cure for the dysentery, mixed with *cascarilla*, and I believe a small portion of *opium*. There is a species of this plant very common in the West Indies, and the southern parts of America, which bears a red flower, has a thick short stalk of a deep-glossy green colour, full of a milky juice, and said to be used by the natives for creating abortions.

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* Rees's Cyclopædia, vol. xxxi. part 2d.

† Edwards' Account of the British Settlements on the Mosquito Shore, p. 211.

‡ *Ipecacoanha.*

YAM * is a large fleshy root, eatable when boiled or roasted, and of which there are several species, all natives of tropical climates: they are highly useful to voyagers, as they will, like potatoes, keep for a considerable time without spoiling. It is universally cultivated in both the East and West Indies, the equinoctial parts of Africa, and in the islands of the South Sea; its roots being no less grateful than wholesome, when either boiled or roasted, and used as bread. The root is often three feet long, as thick as a man's thigh, and sometimes weighs 30 lbs. Its bark is black, the internal part white and glutinous, becoming farinaceous when drest. A favourite dish in Otaheite is composed of this root, with the pulp of the plantain fruit, and the kernel, or internal part of the cocoa-nut grated. It is mealy and easy of digestion, being both dry and palatable; and the roots are inferior to none now in use, either in delicacy, flavour, or matter of nourishment †.

The plants are propagated by the piece; but these must be cut so as to have a little of the skin upon them, by which alone they germinate; for the roots have no apparent gems, but cast out their weekly stems from every part of the surface alike. They are put into holes, two or three in each, which are dug pretty regular, and about a foot and a half

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* *Dioscorea.*

† Browne's History of Jamaica, p. 359.

or two feet square: these are afterwards filled with earth, and the whole covered with cane-trash; which serves to keep the ground cool and fresh, and to prevent the growth of weeds, from which these plants must be carefully preserved, until they grow sufficiently to cover the mould themselves. They are planted commonly in August, and are generally ripe about November or December following. When the roots are dug up, it is necessary to be careful not to wound them, or but as little as possible; for such as are cut throw out their sprouts very early, and are seldom fit for any thing but planting, if they hold out even till that season comes on. After they are dug up, they are rubbed over with ashes, and piled regularly on hurdles raised above the floor, so that the air may pass freely between them: but when they are heaped in great quantities, care should be taken to strew some ashes between the layers *.

Potatoe and Potatoe Slip †.—Both these plants are now cultivated all over America, and supply the poorer sort of people with a great part of their food in many places; they are hardly distinguished by the tops, but the roots of the latter are constantly of a yellow colour, and those of the former white: the

* Browne's History of Jamaica, p. 360.

† *Solanum.*

plant rises equally from the bits and slips; though generally propagated by the latter, and is cultivated by laying a few short juncks of the stem, or larger branches, in shallow interrupted trenches, and covering them with the mould from the banks. The roots grow to full maturity in three or four months, and the propagation is continued by covering the stems, bits and smaller protuberances with mould as they dig up the more perfect bulbs for use. The leaves make a very agreeable fodder for sheep, goats, hogs, rabbits and horses, upon occasion; and the roots boiled, mashed and fermented, make a pleasant cooling drink *.

GINGER †.—This grateful aromatic root had a very early introduction into Hispaniola, and Acosta relates that it was conveyed from the East Indies to New Spain by a person named Francisco de Mendoza. If such was the fact, the Spanish Americans must have entertained very high expectations of profit from its culture, and carried it to a great extent in a very short space of time; it appearing from the same author, that no less than 22,053 cwt. were exported by them to Old Spain in the year 1547.

Ginger is a knotty, flattish root, of a fibrous substance, of a pale or yellowish colour, covered with a

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* Browne's History of Jamaica, p. 154.

† *Amomum Zingiber.*

thin, dusky pellicle, which is usually taken off while it is fresh, and before it is brought to Europe. The plant does not appear far above the ground; it puts forth long green leaves, somewhat similar to those of the leek, and its flowers are red, slightly tinged with green.

There are two sorts of ginger, white and black; of which the former is the most valuable; but the difference arises wholly from the mode of curing; the former being preserved by insolation, and the latter by means of boiling water. The Indians are fond of ginger; they eat both the young shoots of the leaves and the roots themselves, cut small in their sallads and broths; and they make a very fine sweetmeat of them, preserving them with sugar; but in this case they must be taken up at the end of three or four months, while its fibres are tender, and full of sap.

In the cultivation of this root, no greater skill or care is required than in the propagation of potatoes in Great Britain, and it is planted much in the same manner, but is fit for digging only once a-year, unless for the purpose of preserving it in syrup. In Jamaica it attains its full height and flowers about August or September, and fades about the close of the year. When the stalks are entirely withered, the roots are in a proper state for digging, which is generally performed in the months of January and February. After being dug, they are picked, clean-

sed, and gradually seethed, or scalded in boiling water: they are then spread out, and exposed every day to the sun, till sufficiently dried; and after being divided into parcels of about 100 lbs. weight each, they are packed in bags for the market: this is called the "*black ginger*." *White ginger* is the root of the same plant; but instead of scalding the roots, by which they acquire the dark appearance of the former, each root is picked, scraped, separately washed, and afterwards dried with great care: by this operation, more than double expence is incurred, and the market price is proportionably greater.

WILD PINE *.—This plant fixes itself, and takes root on the body of a tree, commonly in the fork of the greater branches of the wild cotton tree. By the conformation of its leaves, which have a broad hollow base †, it catches and retains water from every shower. Each leaf resembles a spout, and forms at its base a natural bucket or reservoir, which contains about a quart of pure water, where it remains perfectly secure, both from the wind and the sun, yielding refreshment to the thirsty traveller in places where water is not otherwise to be procured ‡.

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* *Tillandsia Maxima.*

† Browne's Natural History of Jamaica, p. 194.

‡ Edward's History of the West Indies, vol. 1st, p. 565.

Pine Apple *.—This is a perennial root; the root-leaves are from two to three feet long, and from two to three inches broad, channelled, often a little glaucous; the stem is short, cylindric, thick and leafy; the spike is glomerate, dense, scaly, oval or conic, crowned with a tuft of leaves, similar to the root and stem leaves, but smaller: the flowers are bluish, small and scattered upon the common, thick, fleshy receptacle; the germ, is half buried in the substance of the receptacle, which after the flowers fall off, increases in size, and becomes a succulent fruit, covered on all sides with small triangular scales, and resembling the strobile of the *genus Pinus*, whence its common English name is derived. This root is a native of the tropical regions of America, and was found by Columbus in all the West India islands. This has always been esteemed the richest and best fruit in America: it is, in general, agreeable to the stomach; but the natural mellowness of its juice renders it more agreeable to the natives and old standards, than it possibly can be to new comers, who generally think it too rich and cloying. The juice fermented, would make a good wine; it is sometimes mixed with the rum liquor, when it ferments, and is thought to give it a pleasant flavour †. In South America, a

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* *Bromelia Ananas*, Linn.

† Browne's Natural History of Jamaica, p. 192.

pleasant drink is made of the pine apple, cut in slices, and left to steep for twenty-four hours in water.

PINGUIN PINE APPLE*.—The leaves of this plant are five or six feet long, and the edges very prickly, and these generally arched backwards, which makes them extremely hurtful to either man or beast, that may chance to fall among them; and are, for this reason, generally used in all the fences and inclosures round the country †. The fruits of this plant are separate, and each nearly of the size of a walnut; the pulp has an agreeable sweetness, joined with such a sharpness, that if you make much use of it, or let it lie for any time in the mouth, it will corrode the palate and gums, so as to make the blood ouze from those tender parts ‡. The leaves of all the different sorts of Bromelia, (but this in particular) being stripped of the pulp, yields a strong thready substance not much inferior to hemp, which is frequently made into ropes, whips, &c.; and by the Spaniards into hammocks.

GOURD §.—This plant is cultivated chiefly on

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* *Bromelia Pinguin*, Linn.

† Browne's Natural History of Jamaica, p. 193.

‡ Ibid.

§ *Cucurbita.*

account of the lignous shell of its fruit, which grows frequently large enough to contain between twenty and thirty quarts. Where aloes is manufactured in any quantity, it is commonly preserved in these shells. They are also used to hold water and small grain *.

Scotch Grass †.—This plant is cultivated, and thrives very luxuriantly in all the low and marshy lands of *Jamaica*, where it is now almost universally used as fodder for all their stabled cattle: it is planted near the towns with great care, and found to be one of the most beneficial productions of the island; it is propagated by the joints or root, and set in small drilled holes placed about two feet and a half asunder; the young shoots begin to appear in a few days, and as they grow, they spread and creep along the ground, casting a few roots, and throwing out fresh shoots from every joint, as they run; they soon supply the land, and fill the field with standing plants, the only that are generally cut. It rises variously according to the moisture and luxuriance of the soil, but its general growth is from two to four feet, and is fit to cut in six months from the first planting, and every month or six weeks after, if the seasons are favourable, and pro-

* Browne's Natural History of Jamaica, p. 354.

† *Panicum hirtellum*, Linn.

per care taken to keep the ground free from weeds. An acre of good land well stocked with this plant, in the vicinity of Kingston, is computed to bring in above a hundred and twenty pounds a-year; and is not attended with so much expence or so many inconveniences as when cultivated with any of the other productions of the Island; for being once planted, it holds many years; but when the main stalk or root grows hard and lignous, the young shoots do not push so luxuriantly, and they are then obliged to be planted anew; this however is very easy, as it is done gradually, for they generally supply the pieces as they clean them, and throw up every stubbed or failing root they find, planting a few joints in its place *. From a single acre of this plant, five horses may be maintained a whole year, allowing fifty-six pounds of grass a-day to each †.

GUINEA GRASS ‡.—This plant, like the *Scotch* grass, is also much cultivated in Jamaica. It is planted, like the other, by the joint or gem, and also by the root; but does not require near so much moisture, and is reckoned a more hearty fodder §. "This plant may be considered as next to the sugar "cane in point of importance; as most of the

* Browne's History of Jamaica, p. 133.
† Edwards' History of the West Indies, vol. 1. p. 253.
‡ *Holcus.*
§ Browne's History of Jamaica, p. 366.

" grazing and breeding farms thoughout the island,
" were originally created, and are still supported,
" chiefly by means of this invaluable herbage.
" Hence the plenty of horned cattle, both for the
" butcher and planter, is such that few markets in
" Europe, furnish beef at a cheaper rate, or of bet-
" ter quality, than those of Jamaica *."

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* Edwards' History of Jamaica, vol. 1. p. 253.

QUADRUPEDS.

Horse*.—This noble animal is found in considerable numbers in this country; in the interior there are droves of them, sometimes containing three or four hundred head. Their price is from 12 to 15 dollars per head, or from £2 10s. to £3 Sterling. They are generally small, but very sure footed and hardy, which renders them extremely fit for those mountainous lands: and their hoofs are so hard that they seldom require shoes; but this is the effect of the heat of the country and dryness of the land in general. The horses found in this country are without doubt of Spanish origin; but many of them have a mixture of the English breed; in consequence of some horses of that nation having been imported into the country, during the time that the British were in possession of the Mosquito Shore.

Ox and Cow†; these are to be had in great numbers in this country: there are many large herds of them; and at Plantain River, on the property of General Robinson, there is a herd of at least 500 head, as large and fine, as are to be found in any part of the world.

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* *Equus.* † *Bos.*

The breed in this country, is undoubtedly of Spanish origin, and perhaps mixed with the English; some of which were no doubt imported into the Mosquito territory, when in possession of that nation. Many of them are to be found wild in the interior. The usual price of a tame ox, or even of a cow with its calf, very rarely exceeds from 12 to 15 dollars a-head, or about £2 10s. to £3 sterling. Cow milk is generally very thin in those parts of the world, and tastes frequently rancid, especially when they feed in the lower lands, where the *accacia* and the *Guinea Head* weed grow in plenty; nevertheless, in the mountainous situations they yield sweet milk, and good butter is sometimes made from it. "Within the Spanish territory in particular, nature "has supplied a rich and almost boundless pasturage, "and where the numbers of cattle and horses raised "is prodigious. Many of the latter, so little are "they regarded, return to a state of wildness, and "associate in immense droves, from which it fre-"quently becomes a task of much difficulty and "danger to reclaim them *." The British settlers, while resident at Black River, formerly used to obtain both horses and cattle from the Spaniards in exchange for merchandise.

Considerable quantities of *tasajo*; the flesh of cattle cut up into long shreds, slightly salted, and dried in the sun, are imported into the island of St

* Henderson's Honduras, p. 120.

Thomas from the River Plata; and from whence, after a certificate has been obtained of its having been landed, it is again re-exported to the Havana; where it sells for 14 dollars, and even sometimes for 18 dollars per cwt.

Tasajo are bundles of flesh, rolled up and tied fast, which is done by slicing off all the flesh from the bone with a knife, in long thin narrow stripes. It is then salted and hung up on posts, or between two trees to dry, being left exposed to the wind and weather for a whole week; it is then hung up and smoaked for another week, and afterwards rolled up in small bundles, which in time becomes almost as hard as stone *. When it is to be used it is washed, beat with a mallet, and either boiled or stewed; it is not unpleasant to the taste.

Cattle, it is supposed, can be had in considerable numbers from the Spaniards in the back country, at the moderate price of 4 dollars per head. In consequence of the scarcity of cattle on the Spanish Main and in the West Indies, it is said that Messrs Cavan and Co. of Barbadoes, the contractors for supplying the British Army and Navy with provisions, have been compelled to send to Ireland and the Cape de Verd Islands for cattle: the passage from Poyais to the Windward Islands, may be estimated at about thirty days at farthest, and this country

* A New Survey of the West Indies, &c. by Thomas Gage, London, 1648, p. 143.

could supply annually, without detriment, from 1200 to 2000 head of cattle, besides any quantity of green turtle.

BUFFALO *.—I insert this animal on the authority of Captain Wright †. It is probably the *Bison* of America. "The bunched ox, or wild bison, "(according to Buffon), appears to have inhabited "the northern parts of America only, as Virginia, "Florida, the country of the Illionois, Louisiana, "&c.; for though Hernandez calls it the *Mexican* "*Bull*, we learn from a passage of Antonio de Solis, "that this animal was a stranger in Mexico," &c. The following is a literal translation from de Solis ‡, of the passage alluded to by Buffon, who formed his opinion from a French copy of the work. "In "the second court of the same house, were the wild "beasts, which had been presented to Montezuma, "or taken by his huntsmen, in strong wooden ca-"ges, well arranged, and under cover; lions, ti-"gers, bears, and all kinds of wild beasts, the pro-"duction of New Spain; among which the great-"est novelty was the Mexican Bull, extraordinary "curious, being composed of various animals, "crooked, with a bunch on his back, and the "shoulder curved like a camel, the flank meagre,

* *Bos Bubalus*, Linn.

† Wright's Memoir, p. 15.

‡ La Historia de la conquista, &c. de la Nueva España, por Don Antono de Solis, Madrid 1684, p. 240.

" the tail large, and the neck covered with hair " like the lion; the foot cloven, and the forehead " armed like a bull, whose ferocity it imitates with " equal activity and execution *."

MULES †, are sometimes obtained from the Spanish settlers in the back country; and are more valuable than any other cattle in these hilly countries; and the most generally used both for carriage and the mill in all mountainous estates.

HOGS ‡.—These animals, when tame, differ in nothing from those of the same sort, commonly seen in Europe, being generally bred and raised in the same manner. *The Guinea Hog* §, though a small sort, answers best in America, for it breeds a greater number of pigs than any other kind, and these very rich and delicate: but the old ones are so fat, that none, except the boars, are ever brought to table ||.

PECARRY ¶, or *Mexican Hog*. The tusks of

* Probably the animal, which Captain Wright calls the Buffalo, is nothing more than the *Wild Bull* now so numerous on the continent of America, and which are said to have sprung from one bull and seven cows which were carried thither by some of the first conquerors.

† *Equs Asinus Mulus*, Linn.

‡ *Sus*.

§ *Sus Porcus*.

|| Browne's Natural History of Jamaica, p. 487.

¶ *Sus Tajassu*, Linn.

this species are scarcely conspicuous when the mouth is shut; the ears are short, erect, pointed; the eyes are sunk in the head; the neck is short and thick; the bristles are nearly as large as those of the hedge-hog, longest on the neck and back; in colour it is hoary, black, annulate with white; from the shoulders to the breast is a collar of white. In size and figure, this animal bears an imperfect resemblance to the hog of China; it has no tail. On the back of this animal is placed a glandulous orifice, which has furnished a very common belief that in this part of it the navel is situated. From this gland on the back, constantly distils a thin fetid liquor, which is the most remarkable peculiarity of this species. If killed in the night, provided the gland on the back be taken off, and the liquor which it secretes, carefully washed away at the instant of death, the flesh of the Mexican hog is considered agreeable food, and is esteemed good either fresh or salted. Though existing in a wild state, they are susceptible of domestication, but nothing can overcome their natural stupidity. They grunt with a stronger and harsher voice than the hogs of Asia and Europe; their chief food is fruit, seeds, and roots; but they will devour with great eagerness serpents, toads, and lizards; and they display great dexterity in tearing off the skins of these reptiles; but they do not wallow, and become fat, like the common hog. They produce a number of young at each lit-

ter, and the mother treats them with the tenderness and solicitous care of a kind parent.

WAREE *, called by some the hog of the Isthmus of Darien; and an opinion has been suggested, that it may only be the European hog run wild †; they are very fierce: and if not wounded in any principal part, generally return with great fury upon the assailant, who is obliged to climb into some neighbouring tree to avoid the fury of the beast. The approach of these animals may be heard in the woods at a great distance, by the loud and clamorous noise they usually make.

GIBEONITE ‡.—This is a small animal greatly resembling, though somewhat larger than the guinea-pig. It is plentifully found at Honduras, and easily domesticated. The flesh of it is extolled as a peculiar delicacy §. This animal is near two feet in length; the form thick and clumsy, and bearing some resemblance to that of a pig, for which reason it has sometimes been called the *hog-rabbit*. The head is round; the muzzle short and black; the upper jaw longer than the lower; and the lip divided like that of the hare: the nostrils are large, the

* *Sus Americensis.*
† Henderson's Honduras, p. 124.
‡ *Cavia Paca.—Mus Paca*, Linn.
§ Henderson's Honduras, p. 124.

whiskers long; the eyes large and prominent, and of a brown colour; the ears short, moderately large, round, and naked; the neck thick; the body very plump, larger behind than before, and covered with coarse, short, thinly scattered hair of a dusky brown colour, deepest on the back: the throat, breast, insides of the limbs and belly, dingy white; and on each side of the body are five longitudinal series of roundish, or slightly angular spots, situated contiguous to each other. The legs are short, and the feet have five toes, four of which are armed with strong and sharp claws; that on the fifth toe being very small. The tail consists merely of a small conic projection, not more than half an inch in length. The female is said to produce but one young at a birth.

INDIAN CONEY *.—This animal, which has sometimes been confounded with the former, is of the size of the rabbit; the body plump, and thicker behind than before; the head rather small and somewhat compressed laterally; snout long and rather sharp; nose divided at the tip; and the upper jaw longer than the lower; ears short, broad, naked, and rounded; neck rather long, but thick; legs thin, almost naked and blackish; the hind legs larger than the anterior ones, and furnished with only three toes; tail extremely

* *Cavia Aguti.—Mus Aguti,* Linn.

short, naked, and sometimes scarcely visible; the whole of the animal covered with hard, strong, and shining hair, in general of a rufous brown colour with blackish freckles; rump orange coloured. Authors mention three varieties, viz. The lesser Agouti, or *cavia aguti cunicularis;* the larger Agouti, or *cavia agouti leporina*; the American Agouti, *cavia agouti Americana.*

Buffon observes, that the agouti has the hair, grunting, and voracious appetite of the hog; and when fully satiated, hides the remainder of its food like the fox, in different places. It takes delight in gnawing and spoiling whatever it comes near. When irritated, it bites fiercely; its hair stands erect along the back, and it strikes the ground violently with its hind feet. It does not, he remarks, dig holes like the rabbit, but lives in the hollows of trees. Roots, potatoes, yams, and fruits, are its principal food. It uses its fore paws, like the squirrel, in carrying food to its mouth; runs swiftly up hill, or on even ground; but its fore paws being shorter than its hinder ones, it is in danger of falling upon a declivity. The flesh of the agouti being nearly as good as that of the rabbit, and the skin of such a durable quality, as to form an excellent upper leather for shoes: the hunting of these animals is an object of attention among the Indians. They commonly go in search of them with dogs, or take them in traps; the natives know also how to allure them by whist-

ling or imitating their cries, and kill as many as they please. The young agouti is easily tamed. When in a wild state, they generally dwell in the woods, where the female chooses the most obscure parts, and there prepares a bed of leaves and grass for her young. She usually brings forth two or three at a time, and in a day or two afterwards, she carries them in her mouth like a cat, into a hollow of some tree, where she suckles them for a short space of time, and they are soon in a condition to run about and provide for themselves. They multiply as fast as rabbits, producing three, four, and sometimes five young ones, during every season of the year. When in a domestic state, they never remove to any great distance, and always return to the house; but constantly retain somewhat of their wild disposition.

Henderson says, "this animal, in size, form, and "habit, is very like the hare. It does not run, but "leaps; and whilst in the act of listening, it rears "itself on the hind legs, exactly in the same way. "The meat of it is wholesome, but exceedingly "dry *."

TIGER†, called also the *Jaguar* or *American Tiger*. The colour of this animal is a bright tawny; the upper part of the head striped with black; the sides

* Henderson's Honduras, p. 123.

† *Felis Onca.*

beautifully variegated with irregular oblong ocellar spots; the thighs and legs are variegated with black spots without central spaces; breast and belly, whitish; tail not so long as the body, above marked with large black spots in an irregular manner, beneath with smaller spots. It grows to the size of the wolf, and sometimes even larger. The female is supposed to produce only two young at a birth. The Jaguar "often commits the most open and "daring outrages on the plantations of the settlers. "Sheep, goats, and hogs, are the particular objects "of its depredations. Reports are also given, that "it has sometimes attacked man, but it is considered that such are unfounded; for it fortunately "happens, that the otherwise established reputation "for courage in this animal is usually found deficient in this respect*." It runs swiftly, and by means of its talons, ascends the loftiest and smoothest trees, with a facility that is inconceivable, when in pursuit of quadrupeds, that endeavour, by climbing up the trees, to effect their escape.

Black Tiger†.—This resembles the former pretty nearly, except in colour, which is dusky, and in general plain. The throat, belly, and inside of the legs, are pale-ash; the upper lip white, and furnish-

* Henderson's Honduras, p. 120.

† *Felis Discolor.*

ed with long whiskers, and the eye-brows beset with long hairs; at each corner of the mouth is a black spot; the ears are sharp-pointed, and the paws white. The tail is of the same colour with the rest of the body. "The Black Tiger, which is "deemed much the fiercest, is but rarely discover-"ed *." It grows to the size of an heifer of a year old, and is remarkable for its strength; its form is rather slender. M. de la Borde relates of the black tigers, that they frequent the sea shore, and eat the eggs deposited there by the turtles. They also devour alligators, lizards, and fishes, and sometimes the buds and tender leaves of the Indian fig.

Mexican Cat†, or *Ocelot*, is common, and proves destructive to the smaller kinds of stock, such as poultry, &c.‡ It greatly resembles the common cat, but is three or four times its size, measuring in length about four feet, and its height two feet and a half. In the variety of its markings, as well as colours, the ocelot is extremely beautiful, the male especially. The general colour is bright tawny above, with the breast, belly, and lower part of the sides, together with the limbs, white. A black stripe extends from the top of the head, along the

* Henderson's Honduras, p. 121.

† *Felis Pardalis.*

‡ Henderson's Honduras, p. 121.

back, to the origin of the tail; the forehead is spotted with black, as are also the legs; the shoulders, back, and rump, are finely variegated with ovate blotches, and interrupted longitudinal bands of a deeper tinge than the ground colour, the edges of which are black; the spots are generally marked in the middle with a single spot of black, the stripes with a series of black dots disposed at nearly an equal distance from each other. The tail is diversified with blotches of an irregular form, and black at the tip. In the female, the fur is neither so vivid in colour, nor so beautiful in variety. The Mexican cat, though voracious and fierce, is of a timid nature, and so afraid of dogs, that when pursued by them, it flies to the woods for safety. It never leaves its lurking places in the day time, nor even in the night, when the moon shines; it is under the obscurity of the darkest nights, and when the weather is tempestuous, that it ventures so far as the neighbouring farms in quest of prey. The female is said to have about two young ones at a litter.

Cougouar *, or *Puma*, and sometimes called the American lion, is the largest of the beasts of prey known to inhabit the new continent, measuring in length rather more than five feet from the nose to

* *Felis Concolor.*

the tail, and the tail itself measuring in length two feet eight inches. The form is slender, the body being long, and the animal standing high on his legs. The predominant colour is pale brownish red, inclining in some parts to blackish, especially on the back, which is darkest. This is an animal of great strength and fierceness, preying on cattle and deer; to attack which, it will swim rivers, and burst through the bounds of inclosures; notwithstanding which, when brought into captivity, it becomes almost as gentle as the common cat, allowing itself to be caressed, and even permitting boys to mount its back. The fur is soft; and the flesh, which is white, is eaten by the Indians, who esteem it excellent food.

Leopard *.—This animal is about the size of a grey-hound, the usual length being about three feet and a half; the head is small, the body long, the ears short, and the tail about twenty inches. The body is of a light tawny brown colour above, marked with small round black spots, which are scattered over the back, sides, head, and legs; the belly is white, and the tail marked on the upper side with three large black spots. This animal is particularly distinguished from every other of the same tribe, by having the mane on the collar and between the

* *Felis Jubata.*

shoulders, a character no other animal of this genus is known to possess; the hairs which constitute the mane are about five inches long, and sufficiently copious to be distinguished.

Deer *.—This species is of the size of the common or European Roebuck, and of a reddish colour, but when young, is often spotted with white. The horns are thick, strong, and rugged; they bend forward, are about ten inches long, and trifurcated at the upper part, but vary sometimes in the number of processes. The head is large; eyes large and bright, and the neck thick. "The meat this animal "affords is always found extremely poor, which may "most probably be attributed to the very harassed "life so timid and inoffensive a creature is forced to "undergo †." The deer are very numerous in this country, and the hunting of them is one of the favourite occupations of the Indians. In the adjoining provinces of Guatemala, it is said that when the Indians have killed a deer, they let it lie in the woods or in some hole, covered with leaves for the space of about a week, until it stinks and becomes full of worms: they then bring it home, cut it into joints, and parboil it with an herb which groweth

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* *Cervus Mexicanus.*

† Henderson's Account of the British Settlement of Honduras, p. 122.

there, and greatly resembles *Tanzy*, which sweeteneth it again, and makes the flesh eat tender, and as white as a piece of turkey. Thus parboiled, they hang up the joints in the smoke for a while, and then boil it again, when they eat it, which is commonly dressed with Indian pepper: it is found to eat white and short; and this is the venison of the natives *.

ANTELOPE †, or *Gazelle*, is a most beautiful little creature, about half the size of the deer ‡. Naturalists assert, that none of the numerous species of this genus are found in America; they are mostly confined to Asia and Africa, inhabiting the hottest regions of the Old World, or the temperate near the tropics. "If the animal in question, however, and "which in this country is not known by any other "name, be not a member of this tribe, it might be "difficult to point out to what other class it should "properly belong. The resemblance, as far as de-"scription can be relied on, is in every respect es-"sentially the same §." The following is the description of the Dorcas, the species of Antelope,

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* A New Survey of the West Indies, &c. by Thomas Gage, London, 1648, p. 143.

† *Antilope Dorcas*, Linn.

‡ Henderson's Honduras, p. 122.

§ Ibid.

supposed to inhabit this country. It has its horns, which are about 12 inches long, and surrounded by 13 prominent rings, bent in form of a lyre; the upper parts of the body reddish brown, the under parts and buttocks white, and both divided by a dusky line along the sides; the knees furnished with a long brush or tuft of hair; the tail short, covered with long blackish hairs, and white underneath. This animal is about half the size of a fallow deer: goes in large flocks, is easily tamed, though naturally very timid, and its flesh is reckoned excellent food.

Mr Pennant, in the Synopsis of Quadrupeds, says, "As there appears a general agreement in the nature of the species that form this great genus (*Capra*), it will prevent needless repetition to observe, that the antelopes are animals generally of a most elegant and active make; of a restless and timid disposition; extremely watchful; of great vivacity; remarkably swift and agile, and most of their boundings so light, so elastic, as to strike the spectator with astonishment."—"Antelopes generally reside in hilly countries, though some inhabit plains; they often brouse like the goats, and feed on the tender shoots of trees, which gives their flesh an excellent flavour. This is to be understood of those taken in the chase; for those which are fattened in houses are far less delicious. The flesh of some species is said to taste

" of musk, which perhaps depends on the qualities " of the plants they feed upon."—

" This preface was thought necessary, to point " out the difference in nature between this and the " goat kind, with which most systematic writers have " classed the antelopes; but the antelope forms an " intermediate genus, a link between the goat and " the deer, agreeing with the former in the texture " of the horns, which have a core in them, and are " never cast; and with the latter in elegance and " swiftness *."

ARMADILLO †.—There are three species of this curious animal found here; the *three*, *eight*, and *nine banded*. The armadillos are of a gentle disposition, and inhabit subterraneous retreats or burrows, which they easily excavate by means of their large and strong claws. They are said to feed on roots, melons, yams, grain, flesh, insects and worms; an opinion, says Henderson, that has in some degree been contradicted by observation ‡. The armadillo forms another luxury of the table in this country. Molina says, the flesh is more delicate than that of the Guinea pig; it is only, however, the young armadillos which are in request, for as they grow old, the flesh acquires a strong musky scent, which ren-

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* Pennant's Synopsis of Quadrupeds. † *Dasypus.*

‡ Henderson's Honduras, p. 126.

ders them very disagreeable. All the species are easily tamed, and are a most inoffensive little animal. But in this state they seldom long exist; a circumstance that is chiefly believed to be owing to the difficulty of supplying them with the kind of food to which they have been accustomed, and which principally consists of the insects found in the decayed roots of trees *. We shall give a short description of each species according to the number of bands.

THREE-BANDED ARMADILLO †.—This species, the *Tatu Apara* of Marcgrave, is one of the most elegant species of the armadillo; its colour is a clear yellowish white; the head, shoulders, and posterior part of the body, are coated with regular hexagonal divisions, curiously studded or tuberculated on the surface, and the zones of the body are extremely distinct; the tail is thick and short; the legs are covered with hexagonal divisions or segments, similar to those on the shoulders, but smaller; the ears are rather large; and the claws smaller than in most other species. Marcgrave says, that when the creature lies down to sleep, or when touched by any person, he gathers his feet together, puts his head below his belly, and makes the whole body so per-

* Henderson's Honduras, p. 125.

† *Dasypus Tricinctus*, Linn.

fectly round, that he has more the appearance of a sea-shell than of a land animal.

EIGHT-BANDED ARMADILLO *.—This armadillo has upright ears, two inches long; the head is small, the muzzle sharp, the ears erect, and the eyes small and black; there are four toes on the fore, and five on the hind-feet; the head is covered with a helmet, the shoulders and rump with two shields, and the body with a cuirass, composed of eight moveable bands, connected to each other and to the two shields by nine junctures of flexible skin. The tail is likewise covered with eight moveable rings of crust, and nine joints of flexible skin. The colour of the cuirass on the back is of an iron grey, and the flanks and tail are of a whitish grey mixed with spots of iron grey. The belly is covered with a whitish, granulated skin, interspersed with some hairs †. The crust is not very hard; for the smallest shot pierces it and kills the animal, whose flesh is white and esteemed delicious.

NINE-BANDED ARMADILLO ‡.—This species has long ears. The crust on the shoulders and rump is marked with hexangular figures. There are nine

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* *Dasypus Octocinctus,* Linn.

† Buffon.

‡ *Dasypus Novemcinctus,* Linn.

bands on the sides, distinguished by transverse cuneiform marks. The breast and belly are covered with long hairs. There are four toes on the fore feet, and five on the hind. The tail is long and taper. The length of the whole animal is three feet *. Buffon is of opinion, that the nine-banded armadillo is not a distinct species from the eight-banded; for, in every other respect, they seem to have a perfect resemblance to each other. He therefore supposes that the number of bands, in this species, constitute not a specific, but a sexual difference: the eight-banded one he conceives to be the male. Dr Shaw, in his remarks on the variations that take place on the nine-banded armadillo, is of the same opinion as Buffon. It is not improbable, that a greater number of rows and of bands may be necessary for facilitating the gestation and delivery of the females †. The flesh of this species is delicate.

QUASH ‡.—This animal is also an inhabitant of this part of America. It is considered of the same species as the celebrated Ichneumon, and like that singular animal is destructive of most kinds of vermin §. It feeds on worms, insects, and fruits, and is

* Pennant's Synopsis of Quadrupeds.
† Buffon.
‡ *Viverra Quasje.*
§ Henderson's Honduras, p. 126.

said to be fetid. Whenever the Quash makes an attack, it rather strikes with its teeth than bites, and always lacerates in a most severe degree. A dog of the best breed and courage, once wounded by this animal, will seldom again face it*.

ANT EATER.—There are two kinds of this animal found in the country, the *Little Ant Eater*, and the *Striped Ant Eater*. Henderson says, these animals are easily domesticated; but are slothful and stupid, usually sleeping throughout the day, and roaming at night†. The animals of this genus live entirely on insects, more particularly on the various kinds of ants; in order to obtain which, they extend their tongue, which is of a very great length, and of a roundish or worm-like form, into the nests of these insects; and when, by means of the viscid moisture with which it is covered, a sufficient number are secured, they retract it suddenly into the mouth, and swallow them. These animals have no teeth; although Broussonet has observed, that they have certain bones or processes, not unlike teeth, situated deep at the entrance of the gullet or æsophagus; or rather, according to Camper, at the lower end of the jaws.

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* Henderson's Account of the British Settlements at Honduras, p. 126.

† Ibid.

Little Ant Eater *.—This animal has a conic nose, bending a little down; small ears, hid in the fur; two hooked claws on the fore-feet. The head, body, limbs, and upper part of the sides of the tail are covered with long, soft, silky hair, or rather wool, of a yellowish brown colour. The length from nose to tail is seven inches and a half, and that of the tail eight and a half; the last four inches of which, on the upper side, are naked. The tail is thick at the base, and tapers to a point †. The hair on the body is about nine inches long, soft, and of a brilliant colour, being a mixture of red, with a bright yellow ‡.

Striped Ant Eater §.—This species is distinguished by having five toes on the fore-feet; the tail is long, flat, and entirely covered with hair. It is about thirteen inches long, and ten high.

Opossum ‖.—This animal is the *Merian Opossum* of Buffon, and probably the *Manitou* of Jamaica. It has long, sharp pointed, naked ears; head, and upper part of the body, of a yellowish brown colour; the belly white, tinged with yellow;

* *Myrmecophaga Didactyla*, Linn.
† Pennant's Synops. Quadr. p. 333.
‡ Buffon.
§ *Myrmecophaga Pentadactyla.*
‖ *Didelphis Dorsigera*, Linn.

the fore-feet divided into five fingers; the hinder into four and a thumb, each furnished with flat nails; tail very long, slender, and except at the base, quite naked *. Upon the tail of the male, which is naked, and of a pale red colour, there are dusky red spots, which appear not on the tail of the female. The young of these animals grunt in the same manner as a pig. The females produce five or six at a litter. The young mount upon the back of the mother, and adhere firmly with their tails twisted round hers. In this situation, she carries them about with great nimbleness and security †. Under the belly of the female there is a pouch, wherein she receives and shelters her young. When frightened or pursued, the young ones instantly fly to this receptacle of the parent, which can be closed or opened at will ‡. Edward Tyson, who dissected the female opossum with great accuracy, thus describes the pouch. Under the belly of the female there was an aperture about two or three inches long, formed by two folds of skin, which composed a pouch thinly covered with hair internally. This pouch contained the teats. The young, as soon as brought forth, go into this pouch in order to suck the mother, and acquire so strong a habit of concealing themselves, that, after

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* Penn. Synops. Quadr. p. 210.

† Buffon. ‡ Henderson's Honduras, p. 127.

arriving at a considerable size, they continue to take refuge in the pouch, whenever they are alarmed. This pouch the animal can open or shut at pleasure, which it performs by means of several muscles, and two bones, that are peculiar to the opossum. These two bones are placed before the os pubis, to which they are attached by their base. They are about two inches long, and gradually diminish in thickness from the base to the extremity, and serve as a fulcrum to the muscles which open the pouch. The antagonists of these muscles shut the pouch so close, that, in the living animal, it cannot be seen, unless when forcibly dilated by the fingers. In the inside of the pouch there is a number of glands, which secrete a yellowish substance of so disagreeable a smell, that it infects the whole body of the animal. This matter, however, when dried, not only loses its disagreeable smell, but acquires a perfume which may be compared to that of musk.

Racoon *.—This animal has a black sharp pointed nose; upper jaw longer; ears short and rounded; eyes surrounded with two broad patches of black; from the forehead to the nose a dusky line; face, cheeks and chin, white; upper part of the body covered with hair, ash-coloured at the root; whitish

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* *Ursus Lotor*, Linn.

in the middle, and tipt with black; toes black, and quite divided *. This animal is extremely common, and very destructive to gardens, poultry, &c. †. The Racoon was common in Jamaica in the time of Sloane, who observes that it was eaten by all sorts of people. It feeds on vegetables, but is also very fond of eggs, and will even seize birds if it can catch them: at low water it feeds much on oysters, watching their opening, and with its paw snatching out the fish. It is hunted for its skin; the fur, next to that of the beaver, being excellent for making hats.

The Grey Fox ‡.—This animal is said to be a native of the mountainous parts; but if it be, it must be rare §. This animal, I apprehend, is either the *Canis Argentatus* of Shaw, or the *Canis Thous* of Linnæus; the former is known to inhabit Louisiana, and the latter Surinam.

Small Red Squirrel ‖. This animal is exceedingly numerous ¶, and probably is of the same species as the Cayenne Squirrel **, which has a very

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* Penn. Synops. Quadr. p. 190.
† Henderson's Honduras, p. 127.
‡ *Vulpes.*
§ Henderson's Honduras, p. 127.
‖ *Sciurus.*
¶ Henderson's Honduras, p. 127.
** Sciurus Guajanensis.

small reddish body; lives solitary on trees; feeds on seeds; is naturally very fierce, but may be tamed; and brings forth two young once a-year; it is about the size of a rat.

MEXICAN PORCUPINE *.—This animal has a long tail; four toes on the hind feet, the spines nearly concealed among the long hair; the body of a dusky colour; it is about eighteen inches long; the tail nine inches. The porcupine is frequently taken in out-houses, and on the different plantations. The flesh of this animal is much commended by the negroes, by whom it is sought as a peculiar delicacy †. According to Pennant, it lives on summer fruits, and may be easily tamed. He adds, that the Indians pulverize the quills, and say they are very efficacious in gravelly cases; they also apply them whole to the forehead, where they are said to adhere till full of blood, and then drop off: in this manner they will relieve the most violent headach.

MOUNTAIN COW ‡.—This animal is of the size of a young calf, or heifer, and in shape somewhat approaching to the figure of the hog, and the back arched; its head is thicker than a hog's, and ends in

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* *Hystrix Mexicana.*

† Henderson's Honduras, p. 127.

‡ *Tapir Americanus,* Linn.

a sharp ridge at top; and the male has a snout, or sort of proboscis hanging over the opening of the mouth, in which he has a very strong muscle, serving to retract it at pleasure; the nose of the female is destitute of the proboscis, and the jaws are of equal length; its eyes are small, and very like those of the hog; its ears roundish, bordered with white; and these he can draw forward at pleasure; its legs are thick, and not longer than those of the hog; its fore-hoofs are divided into three portions, and a sort of false hoof behind; but the hind-hoofs have only the three parts; its tail is very small; the skin is hard and solid; and the hair short, and of a pale brown, and when young, variegated with white spots; and along the neck is a bristly mane, an inch and a half high. He has ten cutting teeth, and an equal number of grinders in each jaw, a character which separates him entirely from the ox kind, and from all other ruminating animals *. He lives upon plants and roots, and never uses his weapons against other animals. His disposition is so mild and timid, that he declines all hostilities, and flies from every danger. Though his legs are short, and his body heavy, he runs very swiftly, and he swims still better than he runs. The texture of his skin is so close and firm, that it often resists a musket ball. His flesh is coarse and insipid, but it is eaten by the Indians †. It is said to be rendered

* Buffon. † Ibid.

domestic in some parts of Guiana. When attacked by dogs it makes a vigorous resistance. The tapir produces but one young at a birth, of which it is very careful, leading it at an early age to the sea, and instructing it to swim. This animal is an inhabitant of the thickest and most retired woods in the neighbourhood of rivers and creeks. "It "swims, dives, and is considered to possess the pro- "perty of walking beneath the water. It may "frequently be traced on the sands by the large, "flat, and nearly round impression of its feet. As "this animal cautiously avoids the day, it is but "rarely met with. Sometimes, however, as the "traveller pursues his course up the distant rivers, "and when but little noise is made, it is surprised on "the banks and shot *." Captain Henderson confirms what has been observed above, of the flesh of the tapir being exceedingly coarse and rank. It is however said, that the feet and back of the neck are tolerable.

MONKEY †.—This tribe is very numerous, and the species various; although confined, it is believed, exclusively to the classes which naturalists have denominated *Sapajous* and *Sagoins* ‡. The feet

* Henderson's Account of the British Settlement of Honduras, p. 128.

† *Simia.* ‡ Henderson's Honduras, p. 129.

of both are constructed nearly in the same manner with those of the apes, baboons, and monkeys. But they differ from the apes by having tails. They differ from the baboons by the want of cheek-pouches, and callosities on their buttocks. In fine, they differ from the apes, baboons, and monkeys, by having the portion between their nostrils very broad and thick, and the apertures placed to a side, and not under the nose. Hence the sapajous and sagoins differ not only specifically, but generically, from the apes, baboons, and monkeys. When compared with each other, we likewise find that they differ in generic characters; for all the sapajous have prehensile tails, which are so constructed that the animals can use them as fingers to lay hold of objects. This under part of the tail, which they fold, extend, curl up, or unfold at pleasure, and by the extremity of which they suspend themselves on the branches of trees, is generally deprived of hair, and covered with a smooth skin. The tails of all the sagoins, on the contrary, are proportionably longer than those of the sapajous, and are straight, flaccid, and entirely covered with hair, so that they can neither use the tail in laying hold of objects, nor in suspending themselves. This difference alone is sufficient to distinguish a sapajou from a sagoin *. The *Horned, Brown,* and *Capuchin* Monkey, are the kinds most

* Buffon.

frequently met with in the woods of Honduras. The last is very common, and is a mild playful little animal *.

HORNED MONKEY †.—This animal is easily distinguished from other sajous and sapajous, by the two bunches of black hairs, like horns, on the sides of the crown of the head, which are sixteen lines long: they are two inches three lines distant from each other at the tips.

This animal measures fourteen inches from the end of the nose to the origin of the tail; its head is oblong and its muzzle thick, and covered with hairs of a dirty white. The end of the nose is thick. The tail is fourteen inches long, ends in a point, and is covered with black hairs. The back is of a reddish colour mixed with brown and grey, as well as the exterior surface of the thighs, which are greyish within. There is a brown stripe on the neck and back, which is continued to the tail. The hair on the flanks is of a deep tawny, as is also the belly; but the tawny is clearer, or yellowish on the arms, from the shoulder to the wrist, as well as on the neck and part of the breast. Beneath the clear tawny of the fore-arm, or fore-leg, there are black hairs mixed with reddish: those of the forehead, cheeks,

* Henderson's Honduras, p. 129.

† *Simia Fatuellus*, Linn.

and sides of the head, are whitish, with some shades of tawny. The ears are large and bare; the hair on the tops of the feet and hands is black. The thumb is flat, and all the nails turn up in the shape of a groove *.

Brown Monkey †.—This is the Brown Sapajou, or Sajou of Buffon. It is without beard; the body is brown, the feet are black.

Capuchin Monkey ‡.—This animal has a round head, and a short flesh-coloured face, with a little down on it; hair on the forehead, more or less high and erect in different subjects; top of the head black and dusky, hair on it pretty long, hind part of the neck and middle of the back, covered with long dusky hairs; rest of the back and the limbs of a reddish brown; hands and feet covered with a large skin; tail longer than the head and body, and often carried over the shoulders; the hair on it very long, of a deep brown colour, and appears very bushy from beginning to end §. It is mild, docile, timid; walks on its heels, and does not skip. It has a crying wailing voice, and repels its enemies by a kind of howling. When made angry, it will yelp like a puppy; it carries its tail

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* Buffon. † *Simia Apella.* ‡ *Simia Capucina.*
§ Penn. Synops. Quadr. p. 126.

spirally rolled up, which is often coiled round the neck; it smells of musk.

HONDURAS MONKEY. Captain Henderson mentions a species of monkey found in this part of the world, which he thinks may have escaped particular notice. "In size and form, it resembles the "Apella; and the female, in which the characte-"ristic difference appears most strongly to exist, is "peculiarly denoted by a loose fleshy appendant "membrane, which frequently occasions its sex to "be mistaken *."

OTTER †.—This animal is of an amphibious nature, living more in the water than upon land. It appears that this amphibious animal is as large as a middle-sized dog; that the top of its head is round like that of the cat; that its muzzle is somewhat long, like that of the dog; that it has the teeth and whiskers of a cat; small round black eyes; ears roundish, and placed low; five toes on each foot, with the thumbs shorter than the other toes, which are all armed with sharp brown claws. The tail is as long as the hind legs; the hair is pretty short, and very soft ‡. There is a species found in the rivers of South America, whose fur is extreme-

* Henderson's Honduras, p. 130.

† *Lutra Marina*, Linn. ‡ Buffon.

ly soft and very fine; the hind feet resemble those of the seal, the toes being connected by a strong granulated membrane, with a skin skirting the outward toe, as in some of the water fowl; the tail is short, broad, depressed, and pointed at the end. The sea-otter has been found to weigh 70 or 80 pounds. It feeds upon crabs and fishes; but it may likewise be nourished with the flour of manioc diluted in water. Its skin makes a good fur; and, though it lives chiefly on fishes, its flesh is very good, wholesome, and has no bad flavour *. Vast numbers of sea-otters are found on the north-west coast of America; their skins are exceedingly valuable, and are sold in great quantities to the Chinese. Some of them will fetch from fourteen to twenty-five pounds each.

MANATI †. This animal has been considered as forming the boundary between quadrupeds and fishes. The manati, which is neither a quadruped nor a whale, retains the two fore feet, or rather hands, of the former. But the hind legs, which in the seal and walrus, are almost entirely included within the body, and very much contracted, are totally obliterated in the manati. Instead of two short feet, and a still shorter tail, which the walrus

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* Buffon. † *Trichecus.*

carries in a horizontal direction, the manati has only a large tail, which spreads out like a fan, in the same direction *. The skin is very thick, black, and full of inequalities, like the bark of oak, and so hard as scarce to be cut with an axe, and has no hair on it. Beneath the skin is a thick blubber, which tastes like oil of almonds. The flesh is coarser than beef, and will not soon putrify. The young ones taste like veal. The skin is used for shoes, and covering the sides of boats †. "The "male and female of this species of animal are us- "ually found together; and whilst sporting on the "surface of the different lagoons, are frequently de- "stroyed by the harpoon or dart, in the use of "which the slaves of the settlement, and the Indi- "ans of the neighbouring Mosquito nation, are "wonderfully dexterous. The extraordinary size "of this singular production has likewise been re- "marked. The flesh of it is particularly admired, "and thought equal to the finest veal. The tail, "which forms the most valuable part of the Mana- "ti, after having laid some days in a pickle pre- "pared for it with spices, &c., and eaten cold, is a "discovery of which Apicus might have been "proud, and which the discriminating palate of "Heliogabalus would have thought justly entitled

* Buffon. † Penn. Synops. Quadr. p. 355.

" to the most distinguished reward*." There are two species of this animal found here, the great *West Indian Manati* †, and the little *American Manati* ‡, the former never leaves the sea, but the latter prefers fresh waters, and goes up the rivers to a great distance. Navigators agree in saying, that the little American Manati does not feed entirely on the herbs that grow under water, but that it also browses those on the banks, when it can reach them, by stretching out its head without leaving the water entirely, for it is not able to walk on land any more than the other manatis, nor even to crawl §. This animal is commonly from ten to fifteen feet long, huge and unwieldy, and weighs from twelve to fifteen hundred weight.

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* Henderson's Account of the British Settlement of Honduras, p. 133.

† *Trichecus Australis.* ‡ *Trichecus Manatus*, Linn.

§ Buffon.

BIRDS.

WILD TURKEY *.—This bird does not differ from the domestic sort, except that they are much larger and blacker; they have the same dispositions, the same natural habits, and the same stupidity. They perch in the woods on the dry branches; and when one falls by a shot, the rest are not intimidated by the report, but all continue secure in the same position. According to Hernandes, their flesh, though pleasant to eat, is harder and not so delicate as that of the tame turkeys; but they are twice as large †. Another author says, the flesh of the wild turkey is preferable to that of the tame, but redder. The wild turkeys are of a dingy uniform colour; and seldom weigh more than thirty pounds. "In this part of the continent, the turkey is usually discovered in the thickest and most sequestered "ed recesses of the woods. It can rarely be taken "alive, and when so taken, has seldom been known "to exist any time. In the northern parts of "America it is gregarious; but in the neighbour"hood of Honduras, it is not often seen in the com"pany of more than one associate. The eggs of this "bird have frequently been taken from the nest,

* *Meleagris Gallopavo.* † Buffon.

" and placed under the domestic hen of the same " species, and hatched; but the young ones pro- " duced in this way seldom live, and if not closely " confined, invariably disappear, in quest, as it is " supposed, of more congenial haunts *." The wild turkey, when surprised, runs with prodigious speed, and if hotly pursued, they take wing and perch on the summit of the next tall tree. The Indians make fans of the turkey's tail, and also weave the inner webs of their feathers with thread, or the rhind of the mulberry tree, into an elegant sort of clothing; it appears rich and glossy, and as fine as a silk shag. In Louisiana, the French were wont to make umbrellas by the junction of four of the tails. Turkeys are natives only of America, and of course, unknown to the ancients. The honorable Daines Barrington has published an essay, in which he attempts to prove, that the turkey was known before the discovery of America; but this has been completely disproved; and Mr Pennant has established the point by an elaborate induction of various particulars in the history of these birds; evincing that they are natives neither of Europe, Asia, nor Africa.

CURASSOW †.—This bird is of the size and make of the pea-hen, but the legs are longer and the tail

* Henderson's Honduras, p. 137.

† *Crax.*

narrower and more producted. It has a very beautiful crest of curled feathers along the crown of the head; they are something like those in the tail of a drake, and rise in succession one beyond another in two ranges, which are nearly intermixed. The skin is pretty loose over the head, and continues so over the thickest part of the bill, where it is generally of a yellow colour: the eye is full, round, and blackish *. Linnæus describes the male and female as two distinct species, the first under the name of *alector*, the other *rubra*. There is one respect in which this bird differs very materially from the generally established order of nature, the male being found much inferior in size and plumage to the female †. The male is about the size of a small turkey; the general plumage is deep black, having only a few downy white feathers on the lower part of the belly; the legs strong and dusky brown. The female is rather larger than the male; the bill ash-coloured; the head crested as in the other sex; the feathers white with black tips. The head and hind-part of the neck ash-coloured, or deep rich chocolate colour, with variegated spots of white and black on its neck and pinions ‡. The fore part of

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* Browne's Natural History of Jamaica, p. 470.

† Henderson's Honduras, p. 138.

‡ Ibid.

the neck, and rest of the plumage, red-brown; tail plain and dusky black; legs brown. These birds soon become perfectly domesticated, going about and feeding familiarly with poultry, &c. *. Its flesh is white, though rather dry; but when kept a sufficient time, it is pleasant eating.

Quam †.—The prevailing colour of the plumage of this bird is black mixed with brown, but with different reflections, and some white streaks on the neck, breast, belly, &c.; the legs are of a bright red ‡. In appearance this bird has little to recommend it, but it is eagerly sought on account of the delicacy of its flesh, which is thought equal to that of the pheasant §. It is said to be easily tamed, and appears sensible of being noticed. In a wild state it passes the night in the highest trees: when tamed, it roosts on the top of the houses. It has two distinct cries; one very weak, resembling that of a turkey; the other stronger and plaintive, which seems to indicate either hunger or pain. The flesh of the Quam is excellent meat.

Coquericot.—This bird is probably the *Chacamel*

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* Henderson's Honduras, p. 139.

† *Penelope Cristana.—Meleagris Cristata*, Linn.

‡ Buffon.

§ Henderson's Honduras, p. 139.

of Buffon taken from its Mexican name *Chachalaca-melt*, which in the Mexican language signifies the *crying bird*. This bird is much admired for the delicacy of its flesh.

Mexican Partridge *.—This bird is quite common in the neighbourhood of Honduras, and in size, form, and the colour and disposal of its feathers, very closely resembles the Guinea-hen †. This bird has also some resemblance to the red partridge, in the colour of its plumage, of its bill, and of its feet; its body has a mixture of brown, light grey, and fulvous; the lower part of its wings is of an ash colour, the upper is mottled with dull white, and fulvous spots, as likewise the head and neck ‡.

Quail §.—At particular seasons this bird is plentifully found in the pine lands, and affords considerable amusement to the sportsman ||.

Dove ¶.—Few species are so generally spread as those of the pigeons; for, having a very powerful wing and well-supported flight, they can easily perform very distant journeys **. The brown pigeon

* *Tetrao Nœvius.—Ococolin*, Buffon.
† Henderson's Honduras, p. 140.
‡ Buffon.
§ *Verdix Mexicana.—Tetrao Mexicanus.*
|| Henderson's Honduras, p. 140.
¶ *Columba.* ** Buffon.

of New Spain, mentioned by Hernandez under the Mexican name *Cehoilet* *, which is entirely brown excepting the breast and the tip of the wings, which are white, appears to be only a variety of the Bisset. Its eyes are encircled by a bright red skin, its iris black; its legs red. The one mentioned by the same author under the name *Hoilotl* †, which is brown marked with black spots, is probably but a variety of the preceding, occasioned by difference of age or sex. Another of the same country termed *Kacahoilotl* ‡, which is blue in the upper parts, and red on the breast and belly, is perhaps only a variety of the European wild pigeon §. Henderson says the Dove is common about the British Settlement of Balise ||.

Wood Pigeon ¶.—This bird is also very abundant **. The birds which the inhabitants of the American islands call wood *Pigeons* (*Ramier*), are the real European Bissets. They are migratory, and never halt long in one place. They follow the crops which ripen not at the same time in all the

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* *Columba Mexicana.*
† *Columba Nævia.*
‡ *Columba Cæruela.*
§ Buffon.
|| Henderson's Honduras, p. 140.
¶ *Columba Caribæa.*
** Henderson's Honduras, p. 140.

different parts of the islands. They perch on the tallest trees, in which they breed twice or thrice a-year. When they eat good grain they are very fat, and as well tasted as the pigeons of Europe; but those which feed on bitter seeds, such as those of the Acomas, are as bitter as soot *. The *Columba Caribæa* is a bird of the size of the ring-pigeon, and in great esteem for food, which bird in the West Indies sells for the table at the price of a dollar. In Jamaica it is frequently called the mountain pigeon.

There is a species of the Wood Pigeon which Captain Henderson supposes to be the *Leucocephala*, or White-Crowned Pigeon of Linnæus, "that is migratory from the mountainous parts of the continent to a small island or key about twenty miles distant from the settlement of Balize in a north-east direction. This spot, in consequence of the annual resort of these birds during the months of July and August, has obtained the name of pigeon key. . . . . .The old birds have a peculiarly disagreeable bitter taste, but the young ones are extremely rich and well flavoured, and on being first taken are deemed very choice food †." This species breeds in vast numbers among the rocks on the coasts of Jamaica, St Domingo, the Bahama

* Du Tertre, Hist. Antilles, tom. 2d, p. 256.

† Henderson's Honduras, p. 141.

Islands, &c.; and subsist on the berries of the sweet wood.

SPOONBILL *.—This bird is sometimes called the *Spatula*, and also the *Roseate Spoonbill*, to distinguish it from the *White Spoonbill* †. The body is rose-coloured, the tail-coverts scarlet. There is a variety blood-red: neck white; collar black; tail-feathers scarlet, and is about twenty-seven inches long. The American Spoonbill is only a little smaller in all its dimensions, than the European; it differs also by the rose or carnation which paints the white ground of its plumage on the neck, the back, and the sides; the wings are more strongly coloured, and the red tint runs into a crimson on the shoulders and the coverts of the tail, of which the quills are rufous; the shaft of those of the wing is marked with fine carmine; the head and the throat are naked ‡, The plumage of this bird may be considered handsome, being chiefly of a bright scarlet colour, but in every other respect it is singularly ugly and deformed §. Marcgrave says, that the flesh is pretty good. The Spoonbill lives by the sea-side on small fishes: in the morning and evening they may be seen on the sea-shore, or sitting on

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* *Platalea Ajaja.* † *Platalea Luccorodia.*

‡ Buffon. § Henderson's Honduras, p. 142.

trunks that float near the beach; but about the middle of the day, in the sultriest weather, they enter the creeks, and perch very high on the aquatic trees *. They are not very wild; for at sea they pass very near the canoes, and on land they will suffer a person to get within gun-shot of them, whether they be alighted, or on the wing.

WHITE GAULDING †.—This is a beautiful bird, and resembles the European *Egret* in the beautiful white of its plumage, without mixture of any other colour: it is twice as large, and consequently its magnificent attire of silky feathers is the richer and fuller. Like the European Egret, it has its bill and legs black ‡. This bird is also found in St Domingo, where, in the dry season, it lives beside the marshes and pools §.

GREY GAULDING ‖.—This bird has a crest which consists of fine pendant feathers, some of them six inches long, and of a handsome ash-colour; those which hang under the neck are white, and equally delicate, soft, and flexible; those of the shoulders and of the mouth, are of a slaty-grey ¶. The flesh is said to be good.

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* Buffon.
† *Ardea Egretta.*
‡ Ibid.
§ Buffon.
‖ *Ardea Cocoi.*
¶ Buffon.

BLUE GAULDING *.—This bird seems to be an intermediate between the *egrets* and *herons*, for instead of the large band of feathers of the former, it has only a tuft of rufous unwebbed shoots; it is not quite two feet long; and the upper side of the body, neck, and head are deep blueish, while the under side of the body is white †.

PLOVER ‡.—Several varieties of this bird are periodical visitants of these coasts. There is a species called the *Golden Plover* §, which inhabits almost every part of the world. From the arctic regions, they appear to have migrated into the new-world, where they seem to be more widely diffused than in the old; for a Golden Plover ||, differing only in some shades from the European, is found in Jamaica, Martinico, St Domingo, and Cayenne. In the southern parts of America, these birds inhabit the savannas, and visit the patches of sugar-cane which have been set on fire ¶.

CURLEW **.—These birds are also regularly periodical visitants ††. They inhabit the low slimy

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* *Ardea Leucogaster.* † Buffon.
‡ *Charadrius.*
§ *Charadrius Pluvialis.*
|| *Charadrius Jamaicencis.*
¶ Buffon.
** *Tantalus.* †† Henderson's Honduras, p. 143.

grounds contiguous to the sea, and the great rivers of South America *. There are two sorts of Curlews that differ in bulk as well as in colour; the largest, according to Dampier, are equal in size to turkey cocks; their legs are long, and their bill hooked; they are of a dull colour; their wings are mixed with black and white; their flesh is black, but very good and wholesome. The English call them *double curlews*, because they are twice as large as the biggest of the others. The little Curlews are of a dull brown; their legs and their bill are the same with those of the preceding; they are more esteemed than the others, because their flesh is more delicate †. The species that inhabit this country, I apprehend, are the *Red Curlew* ‡, and the *Acalot* §; the first has all its plumage of a scarlet colour, except the tip of the first quills of the wing, which is black ||; the latter bird has its front bald, and covered with a reddish skin; its bill is blue; the neck and back of the head clothed with feathers, which are brown intermixed with white and green; the wings shine with green and purple reflections ¶. The flesh of the curlew is a

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* Buffon.
† Dampier.
‡ *Tantalus Ruber.*
§ *Tantalus Mexicanus.*
|| Buffon.
¶ *Ibid.*

dish much esteemed; it is eaten in ragouts, and makes tolerable sauce; but it must be previously half-roasted to discharge part of its oil, which has a brackish taste. In the state of nature, these birds live on fish, shell-fish, and insects, which they find in the slime at ebb-tide. They never go very far from the sea-coast, nor advance up the rivers to any considerable distance from the mouths *.

Snipe †.—During the season of the rains, the Snipe abounds in the swamps and marshes ‡. The species found in this country are probably the *Whimbrel* § and the *Brown Snipe* of Cayenne ||. The former is yellowish, with brown legs; and the head of the same colour, streaked with white: the latter is of a cinerous brown, variegated with brick-colour; the under sides of its body and its rump white. These birds are migratory, and visit most parts of the West Indies. The Chevalier Lefebre Deshayes remarks, that a month after their arrival at St Domingo, they found them grow so fat as to appear unwieldy as the quails. The Snipe has commonly abundance of fat, which is of a delicate flavour, and not apt to cloy like ordinary fat: it is cooked like the wood-cock;

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* Buffon.
† *Scolopax.*
‡ Henderson's Honduras, p. 143.
§ *Scolopax Guarauna.*
|| *Scolopax Cayennensis.*

without extracting the entrails, and is every where esteemed delicious game. It is asserted, that the Whimbrel snipe never grows fat, nevertheless its flesh is very well tasted.

Wild Duck *.—During the season of the rains, the different rivers and lakes are plentifully stocked with wild ducks †. There are several species of this bird, but we shall only notice that called the Mexican Sarcelle ‡, which is one of the most beautiful species of the genus: almost its whole plumage is white, dotted with black, especially on the breast; the wings exhibit a mixture of blue, green, fulvous, black, and white; the head is blackish-brown, with varying colours; the tail is blue below, blackish above, and terminated with white. The female, as in all the species of this genus, differs from the male by its colours, which are not so distinct and vivid §.

Muscovy Duck ||.—This bird is very frequently shot in the neighbourhood of Balize ¶. It is much larger than the common duck, and is even the biggest of all the ducks known **. In Jamaica this bird is found to breed so easily, that it is now very

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* *Anas.* † Henderson's Honduras, p. 149.
‡ *Anas Novæ Hispaniæ.* § Buffon.
|| *Anas Moschata.* ¶ Henderson's Honduras, p. 143.
** Buffon.

common in every part of that island, and the most common dish at every table in the country. In Guiana, they nestle on the trunks of rotten trees; and after the young are hatched, the mother takes them one after the other by the bill, and throws them into the water. They are shy and mistrustful; can scarcely be approached, and are as difficult to shoot as most of the other water-fowl.

Teal *.—This bird is found in great abundance during the time of the rains, about the different rivers and lakes. Their flesh is said to be delicate, and well tasted.

Red and Blue Macao †.—This bird is by far the most magnificent of the whole parrot tribe: the sides of the head, from the bill backwards, for a good broad space, are bare of feathers, and covered with a whitish, wrinkled rough skin; in the upper parts of these spaces are placed the eyes, whose irids are yellow; the head, neck, breast, belly, thighs, upper part of the back, and lesser covert-feathers of the wings are of a very fine bright red or scarlet colour; the quill feathers of the wings are of a very fine blue on their outsides, and a faint red on their under side; the first feathers next above the quills are of a fine yellow colour,

* *Anas.* † *Psittacus Macao.*

some of the feathers being tipped with green; the blue quills which fall next the back are tinged with green; the hinder part of the thigh has some green intermixed with the red; the lower part of the belly, and coverts under the tail, as also the lower part of the back, and coverts on the upper side of the tail, are of a very fine blue colour; the tail-feathers gradually shorten towards the sides; some of the longest or middle feathers are wholly red; the shorter or side feathers are partly red, and partly blue, their tips being blue, and their bottoms red.

The Macao chiefly resides in the palm woods, and feeds, like the rest of the birds of this genus, on various kinds of fruit. They fly the best of all the species of parrots, and always perch on the summits of trees, or on the highest branch. During the day they wander to the distance of two or three miles from their favourite spot, but always return in the evening. The male and female sit alternately on their eggs, or cherish their young, and both equally carry food; they never desert the charge as long as their assistance is needed, and always perch together near the nest. The young ones are easily tamed, and in many parts of America these birds are never taken but in their nests, because the adults are too difficult to educate *.

* Buffon.

RED AND YELLOW MACAO *.—Pale scarlet; scapular feathers yellow, tipt with green; quill-feathers above blue, beneath rufous; cheeks naked, wrinkled. The tail-feathers above are scarlet, mixed with violet, beneath dusky red, two middle ones both sides dusky red on the upper half. It is of the same size as the former.

PARROTS.—The greater part of these are quickly domesticated, and if taken young are as suddenly taught to talk fluently. The kinds which are most esteemed for their aptness in this respect are the yellow, and the blue-headed †. The former of these are extremely numerous in this country, and on the the contiguous island of Ruatan ‡. Parrots are generally reckoned very delicate meat, and eat not unlike pigeons; they are very common in the woods of Jamaica, and frequently served up at gentlemen's tables in all the country parts of the island §.

MOSQUITO PARROT ||.—This species generally proves better than many other sorts, if taken while young. The eyes are black, as well as the prominent waxen part between the forehead and the bill;

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* *Psittacus Aracango.*

† Henderson's Honduras, p. 143. ‡ Ibid.

§ Browne's Natural History of Jamaica, p. 473.

|| *Psittacus Mosquitensis.*

and as the feathers, which are all green at first, fall off, they are commonly succeeded by others of a yellow colour.

PARAKEETS.—The smaller sorts of these birds are very abundant, and many of them are extremely pretty *. It is remarked, that the parakeets never associate with the parrots, but always keep together in great flocks.

BILL-BIRD †.—This bird is very common, and is known in other parts by the name of Toucan. The Bill-bird is particularly distinguished by the remarkable length and breadth of its bill, which is nearly equal to the bigness of its body, and this is about the size of the jack-daw ‡. The bill is of a very light substance, and, in the living bird, it is compressible between the fingers. The tongue of the Toucans is, if possible, more wonderful than the bill: they are the only birds which may be said to have a feather instead of a tongue, and a feather it certainly is, though the shaft is a cartilaginous substance two lines broad; for on both sides there are very close barbs entirely like those of ordinary feathers, and which are longer the nearer they are inserted

* Henderson's Honduras, p. 141.

† *Ramphastos.*

‡ Henderson's Honduras, p. 144.

to the extremity. With an organ so singular, and so different from the ordinary substance and organization of the tongue, we might suppose that these birds were mute; yet they have a voice as well as the rest, and often utter a sort of whistling, which is reiterated so quickly, and with such continuance, that they have been denominated the *preaching birds*. The savages ascribe great virtues to this feathery tongue, and use it as a cure in many disorders *. Its plumage is prettily variegated †, and the orbits of the eyes are generally bare. The Toucans are supposed to live on fruits, but in a state of captivity they will eat animal food. They are easily tamed and familiarised; in this state they will eat fruits, fish, and flesh, and devour them with considerable voracity. Whatever is received by the bill they throw into the air, and on its return caught, and without the slightest mastication, instantly devoured. Two species of this bird are known to inhabit the neighbouring kingdom of Mexico. The yellow Toucan ‡, and the blue Toucan §. The former is as large as a pigeon; its bill is thick, black, and hooked; its eyes too, are black, but the iris yellow; its wings and tail are variegated with black and white; a black bar rises from the bill and extends on each side of the breast; the top of

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* Buffon.

† Henderson's Honduras, p. 144.

‡ *Ramphastos Lutens.*

§ *Ramphastos Cæruelus.*

the wings is yellow, and the rest of the body yellowish white; the legs and feet are brown, and the nails whitish. The blue Toucan, is of the size of a common pigeon; its bill is very large and indented, yellow above and reddish-black below; all its plumage is variegated with cinerous and blue.

Banana Bird *.—This bird is little larger than the European gold-finch; it has obtained its name, perhaps, from its resorting to the fruit of the banana-tree for its food, and it is greatly admired for the beauty of its dress, which forms an elegant intermixture of the most gay and vivid colours. † This genus are remarkable for the structure of their nest, which in some species hangs from the branch to which it is attached, and in others it is sewed or fastened with peculiar art, beneath the surface of some very large leaf. There are several species of this bird, but the most singular individual of this kind, is the St Domingo Oriole ‡, and is somewhat larger than the former §. Black; body on the hind-part, wing-coverts, and spot on the wings, pale yellow; it is about eight inches long; builds a purse-shaped nest, on the extreme branches of trees, hanging over water. Immense numbers of this species resort to the neighbourhood of the river Si-

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* *Oriolus.*

† Henderson's Honduras, p. 144.

‡ *Oriolus Dominicensis.*

§ Ibid. p. 145.

bun, near Balize, where they form their pendent nests at the extreme end of the branches of the tallest trees, and generally overhang the water *.

Rice Bird †.—It is also called the *Rice Banting*, and "is frequently termed, from its peculiar rich-"ness and delicacy, the American Ortolan (a dis-"tinction that an epicurean palate must confess to "be not undeservedly bestowed on it) is also mi-"gratory, and is usually found on plantations "where the grain is cultivated, from which it has "derived its familiar appellation ‡." The plumage of the females is rusty over almost its whole body; that of the males is more diversified; the fore-part of the head and neck, the throat, the breast, and all the under part of the body, the upper part of the back and the thighs, black, with a mixture of rusty; the back of the head and neck rusty; the lower part of the back and rump of an olive cinerous; the great superior coverts of the wings of the same colour, edged with whitish; the small superior coverts of the wings, and the superior coverts of the tail, dirty white; the quills of the wing black, tipt with brown, and edged; the great ones with sulphur colour, and the small ones with grey;

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* Henderson's Honduras, p. 145.

† *Emberiza Oryzovora*, Linn.

‡ Henderson's Honduras, p. 145.

tive quills of the tail are nearly like the great quills of the wings, only all terminate in points; lastly, the tail is cinereous, and the legs brown *. Its food consists of grain and insects, and the maize especially; they are remarkably fond of this plant, and prove highly destructive to the crops, by unnecessarily perforating the husks, after satisfying their appetites, and thus leaving openings through which the rain penetrates, and effectually destroys the plants. Some, for this reason, call it the *maize thief*. Its note is much admired. There is a variety of this bird of an olive brown colour, beneath yellowish; rump yellow, transversely lined with brown; greater wing coverts and quill-feathers edged with white.

PELICAN †.—The whole of this extensive coast, as well as the islands and keys, abound with an infinite number of these birds. The Pelican equals, or even surpasses the bulk of the swan, and would be the largest of all the aquatic birds, were not the albatross thicker, and the flamingo much taller on its legs. Those of the Pelican, on the contrary, are very low; but its wings are so broad as to extend eleven or twelve feet ‡. This bird is an excellent swimmer; its feet are completely webbed, its four

* Buffon. † *Pelecanus Fuscus.*
‡ Ibid.

toes being connected by a single piece of membrane; this skin and the feet are red or yellow, according to its age *. The feathers on its neck are only a short down; those on the nape are longer, and form a sort of tuft; its head is flat at the sides, its eyes are small, and placed on two broad naked cheeks; its tail is composed of eighteen quills; the colours of its bill are yellow and pale orange on a grey ground, with streaks of bright red on the middle and near the extremity; this bill is flattened above like a broad blade, with a longitudinal ridge, terminating in a hook; the inside of this blade, which makes the upper mandible, has five protuberant wrinkles, of which the two outer form the cutting edges; the lower mandible consists only of two flexible branches, which accommodate themselves to the extension of the membranous pouch attached to them, and which hangs below as a sack in fashion of a bow-net. This pouch can hold more than twenty quarts of liquid; it is so wide and so long, that a person may put his foot in it, or thrust his arm as far as the elbow †. The flesh of the pelican needed not to have been forbidden among the Jews as unclean, for it condemns itself by its bad taste, its marshy smell, and its oily fat, though some navigators have eaten of it ‡. Their flesh however is

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* Buffon. † Ibid. ‡ Ibid.

said, by Dampier, to be better than that of boobies or man-of-war birds.

CORMORANT *.—These birds are also very numerous on this coast. The Cormorant is a pretty large bird, with webbed feet, which swims and dives with equal facility, and devours multitudes of fish; it is nearly of the bulk of the goose, of a narrower form, rather thin than thick, and lengthened by a large tail more spread than usual in the aquatic birds †. The tail is rounded; body black; head somewhat crested; bill blackish; the base of the lower mandible covered with a yellowish skin, extending under the chin, and forming a pouch, irides green; chin white, surrounded with a yellowish arch; tail long and lax, consisting of fourteen feathers; thighs with a white spot, dotted with black; legs black. Dampier says, their flesh has an exceedingly rank fishy taste; however, it is pretty good, being very fat.

SWALLOW ‡.—Myriads of these birds are the occasional inhabitants of Honduras. The time of their residence is generally confined to the period of the rains, after which they totally disappear §. Most of

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* *Pelecanus Carbo.* † Buffon.

‡ *Hirundo.* § Henderson's Honduras, p. 146.

these birds frequent marshy places, and skim the surface of the ground and water in search of insects, which they catch on the wing with great dexterity, by means of the enormous gape of their jaws. Insects are their peculiar and almost exclusive food, and it is for this reason swallows are regarded with a degree of superstitious tenderness in every country that abounds with noxious creatures of that description. Swallows are equally incapable of bearing the extremes of heat and cold, and on that account, except in very temperate weather, they are oftener seen on the wing in the morning before the heat of the day becomes oppressive, and in the evenings towards sunset, than at any other times. "As soon "as the dawn appears, they in a body quit their "place of rest, which is usually chosen amidst the "rushes of some watery savannah, and invariably "rise to a certain height in a compact spiral form, "and which at a distance often occasions them to "be taken for an immense column of smoke. This "attained, they are then seen separately to disperse "in search of food, the occupation of their day. To "those who may have had the opportunity of ob-"serving the phenomenon of a water-spout, the si-"milarity of evolution in the ascent of these birds "will be thought surprisingly striking. The de-"scent, which regularly takes place at sun-set, is "conducted much in the same way, but with in-"conceivable rapidity. And the noise which ac-

" companies it, can only be compared to the falling " of an immense torrent, or the rushing of a violent " gust of wind *." Buffon remarks, with many other observers, that, in the islands and continent of America, there is often a great difference between the plumage of the male and female of the same species, and often a still greater in the same individual at different ages. There are various species of this bird, the occasional visitants of the bay of Honduras, among which however we shall only notice the following.

THE RAIN BIRD †.—This species is about the size of a sparrow-hawk, and of a darkish, mottled and striped colour. It is seldom seen; but when it flies it takes a thousand turns in its flight, which generally is very lofty. The bill is very short, but thicker than is common to the kind in general, and a little arched ‡. Some naturalists have referred this bird to a different genus, the *Caprimulgus*, or *Goat Sucker*.

BLACK or MARTIN SWALLOW §.—The length of this bird is nearly six inches; the bill black, and

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* Henderson's Honduras, p. 147.

† *Hirundo.—Caprimulgus Carolinensis.*

‡ Browne's History of Jamaica, p. 467.

§ *Hirundo Nigra.*

half an inch long; the tail is forked; and the wings longer by nearly an inch and a half.

St Domingo Swallow *, is of the size of the chimney-swallow; the bill and legs are brown; and its song resembles that of the lark. They generally frequent the most lofty hills, where they fly at a very considerable height, particularly on the approach of storms. They are then seen skimming in great numbers, but seldom show themselves at other times.

Humming Bird †.—Of all animated beings, this bird is the most elegant in its form, and the most brilliant in its colours. The precious stones and metals polished by art cannot be compared to this jewel of nature. The emerald, the ruby, the topaz, sparkle in its plumage, which is never soiled by the dust of the ground. It inhabits the air; it flutters from flower to flower; it breathes their freshness; it feeds on their nectar, and resides in climates where they blow in perpetual succession ‡. All the birds of this kind are easily distinguished by their very delicate make, various glossy colours, small size, long slender arched bills, very short legs and

* *Hirundo Dominicensis.*

† *Trochillus.*

‡ Buffon.

thighs, and swift easy flight. They live chiefly upon the nectar of flowers, which they sip upon the wing, and pass from one blossom or tree to another with inconceivable agility *. The singular ferocity of this little creature is astonishing. Disappointed of its repast, the honey of a flower, it has frequently been observed to tear and scatter the leaves in the most passionate way †. Browne says, they are naturally very gentle; but when they nestle, they grow fierce, and are frequently observed to chace the largest birds that come near their haunts with great fury ‡. They make their little nests chiefly of cotton, or the down of some other plants, intermixed with a few hairs and a little fine moss; and fasten them generally to some small branch of an orange or lemon tree, where they are well covered by the foliage and larger branches §. "The Humming bird, in the greater number of its splendid varieties, can perhaps be found in this country. "The Exilis, one of the most minute and beautiful "of this elegant tribe, is quite common ||." This bird ¶ is brownish-green, with a gloss of red; a glossy green crest with gilt tip, and with black

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* Browne's Natural History of Jamaica, p. 148.
† Henderson's Honduras, p. 148.
‡ Browne's History of Jamaica, p. 475.
§ Ibid. p. 476.
|| Henderson's Honduras, p. 148.
¶ *Trochilus Exilis.*

wings and tail. Several observers have weighed birds of this species. Sloane found the weight of the smallest to be only twenty grains, while other authors mention a specimen that only weighed ten. The two eggs which are found in its nest, are not larger than coriander seeds.

FISHES.

Rock Fish *.—This is much esteemed, and generally reckoned one of the best fishes in America.

Grooper †.—This species is more chubbed and covered with smaller scales than the former, and is thought even to excel it in taste.

Jew Fish ‡.—This species has a considerable resemblance to the preceding, and in point of delicacy and richness is reckoned superior to most of the fishes of Europe. Some of them have been known to weigh two or three hundred pounds.

Black Snapper §.—There are two kinds of this fish, one of which seldom exceeds eight inches in length, and about four in breadth, the other grows to a pretty considerable size, and is esteemed one of the best fishes found in this country.

Red Snapper ||.—This and the preceding are of a more delicate make than the other species of the *Coracinus*, and are covered with larger scales than

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* *Coracinus*, Browne. † Ibid. ‡ Ibid.

§ Ibid. || *Coracinus Rubellus*, Browne.

the rest. This fish is also held in estimation, although not considered so delicate as the black-kind.

Hog Fish *.—There are two species of this fish, which are essentially different from each other both in size and colour. They are both of an oblong form, flatted on the sides, and broad beyond the common proportion. This fish grows to a moderate size, and is esteemed one of the best that swim in those seas; it is both rich and delicate.

Sword-Fish †.—This fish is generally about three feet in length, very flat, and not above two or three inches broad. They are very swift in their motion, and seem to be fishes of prey; for they are frequently found marked with scars, which is a sure demonstration of their pugnatious nature.

Gar-Fish ‡.—The body is long, roundish and slender in proportion; and generally about three feet or better in length; but never above two inches in diameter. It is a fish of prey, and runs with great agility on the surface of the water, leaping frequently from place to place, for many yards together. It is a firm, dry, wholesome fish; but the

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* *Helops*, Browne.
† *Gymnogaster*, Browne.
‡ *Esox*, Browne.

bones are always green, which prejudices many people against it: the eggs are very large *.

Piper †.—This fish seldom exceeds twelve or fifteen inches in length. The body is of an oblong form, and obtusely quadrangular. The upper part of the body is green, beneath yellow, and the back marked with about six broad and equidistant bands of fuscous. This fish is esteemed a great delicacy for the table.

Pike ‡.—This fish bears a strong resemblance to the common pike, but is more slender towards the tail; the colour brown above, beneath paler.

Baracouta §.—There are two species of this fish, one of them, sometimes called the *Sinnet*, seldom exceeds seventeen inches in length, but the other grows frequently to be three feet and a half or better. They are fishes of prey, and seldom spare any thing that comes in their way; but the large species is very ravenous and daring in its attempts: they are both firm and palatable fishes, and much esteemed by many people.

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* Browne's Natural History of Jamaica, p. 443.
† *Esox Brasiliensis.*
‡ *Esox Vulpes.*
§ *Perca*, Browne.

Parrot-Fish *.—This fish has a most beautiful lustre, and even surpasses the dolphin, both in the variety of shades, and the brightness of its native colour. The head is finely variegated; the irides a flame-colour edged with blue. On the middle of the body towards the back is a rhomboid purple spot, accompanied by green, yellow, and blue variegations; the dorsal and anal fin are leniar, the former commencing from the head, and reaching like the ventral fin to the tail, which is even at the extremity. The colours are evanescent, being observed to vanish as the fish expires. It is very generally considered poisonous, and therefore never eaten †. In Jamaica and many parts of America, several other varieties of the Parrot-Fish are frequently served up at table, although not much esteemed.

Mud-Fish ‡.—The species of this tribe are easily distinguished by the fleshy appendicule at the anus: they are, in general, of a drowsy nature, and keep commonly about the bottom, between the weeds. This fish frequently grows to the length of seventeen or twenty inches, and is considered a peculiarly delicate fish, when in full perfection.

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* *Coryphæna Psittacus*, Linn.

† Henderson's Honduras, p. 150.

‡ *Pelmatia*, Browne.

Mullet *.—This fish is of an oblong and pretty turnid form: the head is somewhat depressed, rounded, and thin, and the mouth small.

Calapaver †.—This fish is so like the foregoing, both in habit and appearance, that it is generally thought to be the same species in a more perfect state; it is commonly about two feet or better in length, and is looked upon as a very delicate fish. The eggs of the Calapaver's rowe are very large in proportion to the body ‡.

Mountain Mullet §.—This fish is rich and very well tasted, and abounds with a thin yellow fat, that gives it a very delicate flavour. This species is thought particularly to excel; it is a fresh water fish, and generally found in the mountain rivers ‖. This fish is deemed the most choice of its species, and is usually caught at some distance up the rivers of this country ¶. It is called by some authors the Silvery-white Mullet, and is said to be found in the American seas, particularly about the Bahama islands.

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* *Mugil*, Browne.
† *Mugil.*
‡ Browne's Natural History of Jamaica, p. 451.
§ *Mugil Albula.*
‖ Browne's Natural History of Jamaica, p. 451.
¶ Henderson's Honduras, p. 150.

DRUMMER *.—This fish has the dorsal fin nearly united; and the second ray of the anal fin very large, thick and compressed.

STONE BASS †.—The uppermost of the *laminæ* that cover the gills is serrated in this fish; and the scales are indented at the base, and the lips and pharynx denticulated.

GRUNT ‡.—This fish is thick and of a firm make, but in general, is not much esteemed.

SPANISH MACKAREL §.—This fish is of an oblong form, but slightly flatted, and tapering very gradually towards both ends. The skin is smooth, and the lateral line remarkably crooked.

KING-FISH ‖.—This fish is very like the foregoing, both in make and appearance; they are both hard dry eating, but answer extremely well *caveeched*; and when well dressed in that manner, are very agreeable to most persons.

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* *Cromis*, Browne.
† *Labrus Cromis*, Linn.
‡ *Cromis*, Browne.
§ *Scomber*, Browne.
‖ *Scomber*, Browne.

CAVALLEE *.—This is a coarse dry fish, and not much esteemed.

SNOOK †.—This fish grows to a considerable size, being frequently no less than three feet and a half in length, and proportionably thick and tumid, especially about the breast and belly. It is generally looked upon as one of the best fish in America, and eats very much like a full grown cod; and is greatly admired by most people.

OLD-WIFE ‡.—The body of this fish is generally about twenty inches in length, and nine over. Before it is dressed it must be skinned; it is much liked in America; and its name has given rise to a saying, viz. That an Old Wife is the best of fish, and the worst of flesh.

FLOUNDER §.—The lateral line is very small and straight in this fish, and crossed by several transverse black lines, formed by some of those small scales that cover the surface of the skin. It is a very delicate fish.

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* *Scomber*, Browne.

† *Macrocephalus*, Browne.

‡ *Balistes*, Browne.

§ *Pleuronectes*, Browne.

Eel *.—This fish is frequent in all the lagoons and rivers, and does not differ from those found in Europe.

Porgee †.—This fish is of an even grey colour, and in form and appearance resembles the Bream. It is esteemed a good wholesome fish.

Sprat ‡.—This fish is somewhat larger than the common sprat, and is much admired for the sweetness of its flavour §. In the Windward Islands they are often found to be poisonous ||. This fish is about twelve or fourteen inches in length; the back blueish green, with rows of brownish spots; the sides of the head green, and of the body, silvery white.

Porpoise ¶.—The upper part of the body is of a blueish-black colour, and the lower white; the head obtuse, with small eyes and teeth, the latter of which are acute, and the vent somewhat bilobate. The Porpoise lives chiefly on the smaller kinds of fish, and is observed when in quest of food, to turn up the sand and mud at the bottom of the water

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* *Muræna*, Browne.
† *Sparus.* ‡ *Clupea Thrissa.*
§ Henderson's Honduras, p. 151.
|| Browne's History of Jamaica, p. 443.
¶ *Delphinus Phocæna.*

like the hog: it is often seen darting and tumbling over in the water like the dolphin, and it has been remarked at sea, that they always swim against the wind. This animal is remarkably fat, and being covered immediately under the skin with a very thick coat of lard, affords an abundance of oil.

TROPON *.—This fish frequently grows to the length of two feet, or two feet and a half; but it is so full of bones, that it is seldom used but in broths. It is considered by some naturalists as a species of the *Scomber*, and has been briefly characterised by Linnæus, as having the last ray of the dorsal fin longer than the rest.

STING-RAY †.—This fish is perhaps the same with the *Raja Pastinaca*, and which is described as being armed on the upper part near the middle, with a very long, flattened, and sharp-pointed bone or spine, finely senated in a reversed direction on both sides: with this the animal is capable of inflicting very severe wounds on such as incautiously attempt to handle it; and it answers the purpose both of an offensive and defensive weapon. A species of the Raja called the Thresher, grows to a monstrous size, and is said to combine with the Sword fish to attack the Grampus. The Sting-ray, is frequently brought

* *Amia.* † *Raja.*

to table, and when well dressed, is liked by most people.

SHEEP-HEAD.—This fish is found in the Bay of Honduras.

SHARK *.—This is one of the most ravenous inhabitants of the sea, and seldom spares any thing that comes in its way, let its nature or form be what it will. This fish is of a solitary nature, and will devour with the most indiscriminating voracity almost every animal substance whether living or dead. The fore part of the head of the shark stretches a good way beyond the under jaw, which, when its motion is swift, frequently obliges it to turn upon its back to catch its prey more easily. The skin is rough and hard, and serves to scrape and polish all sorts of hard-wood.

CAT FISH †.—This is supposed to be the same with the *Squalus Stellaris*. It is from two to six feet long, and feeds chiefly on crustaceous animals, molluscæ, and the smaller kinds of fish.

GREEN TURTLE ‡.—This is one of the largest kind, often measuring above five feet in length, and weighing more than 500 or 600 pounds. It is very

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* *Squalus.* † *Squalus.* ‡ *Testudo Mydas.*

delicate and tender food while young; the juices are reckoned great restoratives, and are often observed to heal and smooth the skin in scorbutic and leprous habits; nay, it is said even to cure the most obstinate venereal taints *. The method of taking the turtle at the Bahama islands, is by striking them with a small iron peg two inches long, put in a socket at the end of a staff twelve feet long. Two men usually set out for this work in a little light boat or canoe, one to row and gently steer the boat, while the other stands at the head of it with his striker. The turtle are sometimes discovered by their swimming with their head and back out of the water, but they are oftenest discovered lying at the bottom, a fathom or more deep. If a turtle perceives he is discovered, he starts up to make his escape, the men in the boat pursuing him, endeavour to keep sight of him, which they often lose, and recover again by the turtle putting his nose out of the water to breathe: thus they pursue him, one paddling or rowing, while the other stands ready with his striker. It is sometimes half an hour before he is tired; then he sinks at once to the bottom, which gives them an opportunity of striking him, which is by piercing him with an iron peg, which slips out of the socket, but is fastened with a string to the pole. If he be spent and tired by being long pur-

* Browne's History of Jamaica, p. 463.

sued, he tamely submits, when struck, to be taken into the boat or hauled ashore.

Logger-head Turtle *.—This species is larger than any yet discovered. It resembles the green turtle, but is distinguished by the superior size of the head, the proportional breadth of the shell, and by its deeper and more variegated colours. In a commercial view, this species is of little importance; its flesh being rank and coarse, and the laminæ of the shell too thin for general use. It is said, however, to afford a good quantity of oil, which may be used for lamps, &c.

Hawk's-bill Turtle †.—The flesh of this species, although frequently used in all parts of America, is not so delicate nor so much esteemed as that of the green turtle; but its scales are the most valued, being generally the thickest and best coloured ‡. The whole spoils of the tortoise consist in thirteen leaves or scales, eight of them flat, and five a little bent. Of the flat ones, there are four large ones, sometimes a foot long, and seven inches broad §. The lamellæ are semi-transparent, and elegantly variegated with whitish, yellowish, red-

* *Testudo Caretta.*

† *Testudo Imbricata.*

‡ Browne's Natural History of Jamaica, p. 465.

§ Mortimer's Commercial Dictionary.

dish, and dark brown clouds and undulations, so as to constitute, when properly prepared and polished, one of the most elegant articles for ornamental purposes. These laminæ form the external coating, and this is raised or separated from the bony part, which it covers, by placing fire beneath the shell; the heat soon causing the plates to start, so as to be easily detached from the bone. These plates vary in thickness according to the age and size of the animal, and measure from an eighth to a quarter of an inch in thickness. A large turtle is said to afford about eight pounds of tortoise-shell; or, according to M. Schoepf, from five to fifteen, or twenty pounds; and unless the animal itself be about the weight of 150 pounds, the shell is not much worth.

TERRAPIN *.—The body of this species is generally of a compressed oval form, and seldom exceeds eight or nine inches in length. It lives chiefly among the weeds that grow about the different lagoons. It is looked upon as delicate wholesome food by many people †.

HICATEE ‡.—This species, though smaller than

* *Testudo Palustris.*

† Browne's Natural History of Jamaica, p. 465.

‡ *Testudo Sulcata.*

the sea turtle, is in no other respect inferior; it is found in the rivers and creeks of the interior *. The shell is very deep, and often above a foot and a half in length; but the surface is generally divided into oblong hexagons, yellow in the centre, and radiated with slender even streaks from thence to the circumference †.

Cray-Fish ‡.—This is sometimes called the Sea-Lobster, and is extremely plentiful, and much admired for the whiteness and delicacy of its meat. It sometimes grows to a very considerable size.

Crabs §.—The species found in this country are very numerous. They are all much esteemed, and may be caught in great numbers.

Mangrove Oyster ‖.—It receives its name from its adhering in clusters to the branches and roots of the tree of this name. It has a thin shell, and varies in form and size, but is often as large as the palm of the hand. This oyster is considered very little inferior in taste to the European, either in

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* Henderson's Honduras, p. 152.

† Browne's History of Jamaica, p. 466.

‡ *Cancer Cærulescens.*

§ *Cancer.*

‖ *Ostrea Parasitica.*

flavour or delicacy. "It is a circumstance of no "small utility in an infant settlement, that the "mouths of many of the principal rivers produce a "prodigious quantity of oysters, both of the man-"grove and flat species; of the latter sort, there "are banks that appear inexhaustible; so that with "respect to food, the inhabitants of this country "seem almost to be exempted from the general "curse entailed upon our first parents *."

Conque †.—This shell-fish is plentifully found about the different keys, and is esteemed a wholesome and nutritious food. Before they are dressed, it is necessary to beat them with a wooden mallet, to make them tender.

Wilk ‡, is found in abundance in the neighbourhood of the small islets on the coast, and is considered as both an wholesome and agreeable food.

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* Edwards' Account of the British Settlements on the Mosquito Shore, Vol. 5th, App. p. 208.

† *Concha.* ‡ *Dolium.*

REPTILES.

RATTLE-SNAKE *.—A small species of this snake is said to be met with about the high-lands adjacent to the Bay of Honduras; but is seldom found so large as in the American States †.

BLACK-SNAKE ‡.—This little reptile is very slender, and extremely active; it is generally from two feet and a half to three feet, or better, in length. It is perfectly harmless. "I have never heard of any da-"mage done by them, though they are frequent in "most of the colonies §."

TOMMY GOFF.—A venomous species of snake found in the neighbourhood of Balize.

BARBERS POLE.—Another venomous species found at the same place. They usually infest out-houses or thatched buildings ‖.

WOWLER ¶.—This snake is said sometimes to be

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* *Crotalus.* † Henderson's Honduras, p. 153.
‡ *Coluber.*
§ Browne's History of Jamaica, p. 461.
‖ Henderson's Honduras, p. 154.
¶ *Coluber.*

as big as a man's waist, and twelve or fourteen feet long, with a very wide mouth: when they lie stretched out at length, they appear like old fallen trunks of trees, covered with a short moss *. "Its "appearance is certainly terrific; but it is only in "this way that it is alarming, as it has never been "known to hurt the human species. It is never- "theless a mortal enemy to birds generally, and to "the smaller kinds of animals, which it usually "swallows entire †." This species of snake is found in considerable numbers in the island of Ruatan.

IGUANA ‡.—This species of Lizard has a long round tail; back serrated; the throat crest denticulated. This, of all the lizard tribe, is of the most peculiar form, and grows to a considerable size. It is sometimes three, four, or five feet long. The general colour is green, but variously shaded in different animals. The back is strongly serrated, which, as well as the denticulations of the pouch of the throat, gives it rather a formidable appearance. It has the power of inflating the throat pouch to a very large size. It frequents rocky and woody places, and feeds chiefly on insects and vegetables. The Igua-

* Introduction to Jeffrey's West India Atlas, p. 17.
† Henderson's Honduras, p. 154.
‡ *Lacerta Iguana.*

na is a native of most parts of America, and generally an inhabitant of the woods; but, like most of the tribe, lives a very considerable time without food, and changes its colour with the weather, or the native moisture of its place of residence *. The flesh is reckoned a great delicacy, and is usually dressed as a fricassee, in which state they are often preferred to the best fowls. The Iguana may be easily tamed while young, and is both an innocent and beautiful creature in that state †. It will follow the human race like a dog; it is caught by a noose thrown over its head, and likewise by dogs trained for that purpose.

Basilisk ‡.—This lizard is about eighteen inches long, of a pale ash-brown colour, with some darker variegations about the upper part of the body. It resides principally among trees, and its food is insects. It is active, and by means of its dorsal crest or fin, it is enabled to spring from tree to tree. It can swim with great ease. It has a very formidable appearance, but is quite harmless.

Gally-Wasp §.—This reptile is most frequently

* Browne's History of Jamaica, p. 462.
† Ibid.
‡ *Lacerta Basiliscus.*
§ *Lacerta.—Occidua*, Shaw.

met with in the woods, and about old buildings; it is likewise sometimes observed in low marshy places. It is generally of a dirty colour, clouded with cross stripes of a lighter or darker hue, and changes often from that to a fine golden yellow. It is generally from one to two feet or better in length *. The bite of this animal was never known to be mortal; but the effects of it have frequently been exasperated by terror, and the ridiculous method of cure. It is but very seldom such accidents can happen, as this creature is both shy and timid, and never bites, unless when trod upon, or otherwise hurt. "Although they have been vulgarly "reputed most venomous creatures, yet there has "not been one well attested account, to prove that "they are so in the smallest degree, more than "other animals of equal size, such as large rats, ferrets, &c. whose bite is severe, but not malignant †."

Wood-Slave ‡.—This species is generally thought to be venomous. Browne states he never knew an instance of it; and Henderson says, "the greater "number of the members of this class will be found, "if prejudice can be surmounted, and the least en-

* Browne's History of Jamaica, p. 463.
† Long's History of Jamaica, Vol. 3d, p. 879.
‡ *Lacerta.*

"couragement be extended towards them, the "most inoffensive little creatures in nature, and that "it may even be soon brought into a state of play-"ful familiarity *." They are generally of a flatted oblong form, and taper gradually and almost equally towards both ends †.

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* Henderson's Honduras, p. 155.

† Browne's History of Jamaica, p. 469.

INSECTS.

MUSQUETOE*.—These insects are of the gnat tribe, and subsist on the blood and juices of larger animals, which they suck by means of their proboscis. They are very troublesome to all new comers: their usual time of sallying forth is about sun-set; and from this time till the morning, they possess the greatest activity. During the former part of the day, they are commonly torpid, and forced by the violence of the breeze, to keep in their hiding places †. The fire-flies are natural enemies to the Musquetoes, and feed upon them. The Indians having discovered this, used to attract these flies with lighted torches; and when they had caught a sufficient number, let them loose in their huts at night, to drive the Musquetoes from their hammocks; which office, they are said to have performed very effectually ‡.

SAND-FLY §.—These little insects assault the hands and face, and though extremely minute, their sting is sensibly felt, though the effect is rather teazing than painful: they seldom go into the

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* *Culex.*

† Long's History of Jamaica, Vol. 3d, p. 883. ‡ Ibid.

§ *Culex.*

houses, keeping generally about the shores and open sandy bays, where they are very busy every calm evening.

Fire-fly *.—There are two or three species of this curious insect found in this country. A person may, with great ease, read the smallest print by the light of one of these insects, if held between the fingers and moved gradually along the lines, with the luminous spots immediately over the letters; about eight or ten of them being put into a clear vial, will give light enough to read or write very clearly by. They are very seldom seen in the day time, but wake in the evening, and continue both to move and glow for a considerable part of the night †.

Cock Roach ‡.—These insects are very flat, and creep into every chest or drawer where they find the least crevice; the greatest care ought to be taken to prevent this, as they impart to every thing they touch a most offensive smell. This creature throws off its outward coat very frequently, and appears quite fresh and young after every change §. They are exceedingly industrious in gleaning up such filth and nastiness, as the slovenly neglect of bad

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* *Elater.* † Browne's History of Jamaica, p. 432.
‡ *Blatta.* § Ibid, p. 413.

housewives have left in holes and corners undisturbed by the broom *.

Chigger †.—The body of this insect is reddish-brown; abdomen of the female, when gravid, orbicular and swollen to near a hundred times its usual size. This insect is common in all the tropical regions of America. Where there are many hogs, there is usually much of this sort of vermin ‡. It is often extremely troublesome, penetrating into the skin of the toes and feet of the inhabitants, where it lodges its eggs, and frequently causes sores and ulcers: this is not performed, however, without creating an intolerable itching in the part, which gives notice of the attempt to form a lodgement; in which case, it is thought adviseable to extract it with the bag, by carefully managing the point of a needle, to clear it without breaking the membrane; and the cavity is immediately filled up with tobacco-ashes, which allay the itching, and prevent a sore. Uncleanly persons, or those who seldom wash their feet, are most frequently subject to this annoyance. They may be destroyed without extracting, by the application of a cataplasm, made with Castile soap and train oil mixed; sometimes a little

* Long's History of Jamaica, Vol. 3d, p. 887.

† *Pulex Penetrans.*

‡ Gage's New Survey of the West Indies, p. 166.

aloes is added; a poultice of pounded cassada root, answers the like purpose *.

Cochineal †.—The body of this insect is depressed, downy, and transversely wrinkled; the abdomen is purplish, the legs short and black, the antenæ subulate, and about one-third of the length of the body. This insect is of the torpid sort, and performs all the necessary offices of life while it is small; but it soon grows large, and then lives almost motionless for the remaining part of life ‡. The female of the cochineal insect, in its full grown or torpid state of pregnancy, swells to such a size in proportion to that of its infant state, that the legs, antennæ, and proboscis, are scarcely to be discovered. It is the female only that is valuable for its dye. The male is a small and rather slender, two winged fly, about the size of a flea, or still smaller, with jointed antennæ, and large white wings in proportion to the body, which is of a red colour, with two long filaments proceeding from the tail. It is an active and lively animal, and is dispersed in small numbers among the females, in the proportion of one male to a hundred, and according to some writers three hundred.

The substance known in commerce by the name

* Long's History of Jamaica, Vol. 3d, p. 883.

† *Coccus Cacti.*

‡ Browne's Natural History of Jamaica, p. 436.

of cochineal, is the most precious of all our dyeing drugs; it is in the form of hemispherical shrivelled grains, about an eighth of an inch long, of a deep reddish-purple colour, and covered more or less with a white down: they are very light and easily rubbed to powder between the fingers. Some of it is of a dusky grey, and the surface, with a mixture of red in it, and this is esteemed the finest of all. The Spanish merchants distinguish at least two kinds, the best or domesticated, called *grana fina*, and the wild, or *grana sylvestra*; of these the latter is not more than half the size of the former, and is covered with a much longer down; on which account it always bears a much lower price in the market. But in trade, four sorts of cochineal are distinguished, *mastique*, *campeschane*, *tetraschale*, and *sylvester*; of which the first sort is esteemed the best, and the last sort the worst.

The cochineal insect is a native of Mexico, and was in common use among the inhabitants as a dyeing drug when the Spaniards first came into the country; since that period its use has become more and more general, not only in Europe, but in various parts of Asia; and, as almost the whole of this valuable commodity is still raised in Mexico, Peru, and the adjoining Spanish settlements, it becomes every year an object of more sedulous cultivation than before.

The plants upon which these insects are raised by

the cultivators of cochineal, is the nopal, or nopal-leca of the Indians, called by some the Indian fig-tree, and by botanists the *cactus opuntia,* or prickly pear-tree. The culture of this plant for the purpose, consists merely in lopping the rotten or decayed branches, and removing other plants and weeds away that may injure them. Those they plant in an argillaceous earth intermixed with gravel and stones. The Indians of the provinces of Guaxaca and Oxaca, who attend particularly to the culture of the nopals, plant them near their habitations, and call them nopalaries.

The juice of the nopal, on which these insects breed, is their sole subsistence. About the 15th October, which in Mexico is the commencement of the fine season, they distribute the cohineals upon the nopals. This operation consists merely in placing the females, while they are yet young and active, in a number of small nests among the leaves, from whence they wander about over various parts of the plant in search of the particular branches to which they afterwards attach themselves, and are visited by the males.

When the insects are at their full growth, they are gathered and put into pots of earthenware, but much attention is requisite to prevent them from getting out, as in that case great numbers of them would be lost; though there is no danger of this when they are at liberty on the nopal, this being

their natural resort; for though they often remove from one leaf to another, they never quit the plant; nor is it uncommon to see the leaves entirely covered with them, especially when they are arrived at maturity. When they are confined some time in these pots, they are killed, and put into bags.

The Indians have three different methods of killing these insects; one by immersing them in hot water, another by fire, and the third by exposing them to the burning rays of the sun. Those who use hot water are very careful to give it the requisite heat, and that the quantity of water be proportioned to the number of insects. The method of killing them by fire is to put them in shovels, in an oven moderately heated for the purpose, the fine quality of the cochineal depending on its not being over dried at the time of killing the insects. Some also are killed by the fumes of heated vinegar, and others by smoke. Those killed and dried in the sun, seem however to have the preference.

At the third annual gathering of cochineal, a certain number of females are left adhering to branches of the nopal, which are then broken off and kept carefully under cover during the rainy season; when this is over, the stock of cochineal, thus preserved, is distributed over the whole plantation of nopals, where they soon multiply with great rapidity. In the space of two months, the first crop is gathered by detaching the insects with a blunt knife, after

which they are put into bags, and dipped in hot water to kill them, and finally dried in the sun, by which they lose about two-thirds of their weight.

Jefferies, in his introduction to the West India Atlas, says, that cochineal is obtained from the Mosquito territory, although only in small quantities; and as it is known to be a native of the adjoining Spanish Provinces, there is little doubt, that it would flourish here, in equal perfection, if some of the settlers were to give their attention to it, and commence by introducing the nopal into their gardens.

AGRICULTURE.

PREVIOUS to making a few remarks upon the different productions of the vegetable kingdom, that might be cultivated in this country with success, it will be proper to state the expence of labour. The native Indians readily engage themselves to any of the settlers, for a given time, and at a fixed price. Their wages, in general, are about twenty-five shillings sterling per month; but as they commonly prefer receiving clothing and other articles in lieu of money, the most advantageous way for a settler, is to keep a supply of such articles always by him, which if he purchases with ready money, will prove a considerable saving to him, and consequently reduce the price of labourage. It is customary for the settlers to feed their Indian labourers, but this after the first four months, by which time he will have a crop of Indian corn, will amount to almost nothing, as the only articles necessary for him to purchase are rum and ammunition: one Indian in a single day's hunting or fishing, being able to supply the whole family, however numerous, with provisions for a week, consisting of venison, wild hogs, game, turtle, fish, oysters, &c.: taking this into consideration, I estimate the yearly expence of each Indian labourer to an *established* settler at £13 *per annum*, and to a *new* settler at £16 *per an-*

num; to which may be added, the additional sum of £4 for provisions, the first year, which will make in all £20 *per annum*, for the expence of each labourer.

The principal articles of produce adapted for cultivation in this country, are the Sugar-cane, Cotton, Indigo, Coffee, Cocoa, Tobacco, Rice, Maize, Pimento, Ginger, Anoto, Aloes or Agave, and Cochineal. But as the soil and climate is universally admitted to be superior to that of the West India Islands, there can be no doubt, that all the productions that are raised in them, would flourish here, not only as well, but even in a superior manner; it is therefore probable, that the following articles would well repay the labour of the settler, and be attended with the greatest prospect of success, viz. Bombay *yellow* Cotton, Ipecacuana, Jalap, Lupins, Mulberries, Olives, Senna, Silk, Silk-Grass, Sarsaparilla, Saffron, Turmeric, Vines, &c. Many of these are indigenous of the Mosquito territory, and flourish spontaneously in wild, but native luxuriance.

Sugar Cane.—This plant is a jointed reed, terminating in leaves or blades, whose edges are finely and sharply serrated. The body of the cane is strong but brittle, and when ripe, of a fine straw colour, inclinable to yellow; and it contains a soft pithy substance, which affords a copious supply of

juice of a sweetness the least cloying and most agreeable in nature. The intermediate distance between each joint of the cane varies according to the nature of the soil; in general, it is from one to three inches in length, and from half an inch to an inch in diameter. The length of the cane depends upon circumstances; in general, it measures from three and a half to seven feet, exclusive of the flag part. *Ratoons* are the suckers that spring from the roots or stoles of the canes that have been previously cut, and are commonly ripe in twelve months. Canes of the finest growth are called plant-canes; they are the immediate produce of the original plants, and require from fifteen to seventeen months to bring them to maturity. The first yearly return from their roots, are called *first ratoons*; the second year's growth, *second ratoons*; and so on, according to their age. In most parts of the West Indies it is usual to hole and plant a certain proportion of the cane land (commonly one-third) in annual succession. This, in the common mode of holing the ground by the hoe, is frequently attended with great and excessive labour to the cultivators, which is saved altogether by the system we are treating of. By the latter method, the planter, instead of stocking up his ratoons, and holing and planting the land anew, suffers the stoles to continue in the ground, and contents himself, as his cane fields become thin and impoverished, by supplying the vacant spaces with *fresh plants*.

The usual mode of holing by manual labour is this :—The quantity of land intended to be planted being cleared of weeds and other incumbrances, is divided into several plats of certain dimensions, commonly from fifteen to twenty acres each ; the spaces between each plat or division are left wide enough for roads, for the convenience of carting. Each plat is then subdivided, by means of a line and wooden pegs, into small squares of about three feet and a half. The labourers are then placed in a row in the first line, one to each square, and dig out with their hoes the several squares, commonly to the depth of five or six inches. The mould which is dug up being formed into a bank at the lower side, the cane-hole will be about fifteen inches in width at the bottom, and two feet and a half at the top. They then fall back to the next line, and proceed as before. Thus the several squares between each line are formed into a trench of much the same dimensions with that which is made by the plough. The cane-holes or trench being now completed, and the cuttings selected for planting, two of them are placed longitudinally in the bottom of each, and covered with mould about two inches deep ; the rest of the bank being intended for future use. In about fourteen days the young sprouts begin to appear, and as soon as they rise a few inches above the ground, they ought to be carefully cleared of weeds, and furnished with an addition of mould from the

banks. This is usually performed by the hand. At the end of four or five months, the banks are wholly levelled, and the spaces between the rows carefully hoed. Frequent cleanings, while the canes are young, are absolutely necessary, and all the suckers that spring up after the canes begin to joint, ought to be carefully removed.

The best seasons for planting is between August and the beginning of November. By having the advantage of the autumnal rains, the young canes become sufficiently luxuriant to shade the ground before the dry weather sets in; thus the roots are kept cool and the earth moist.

The system of cultivation among planters, who are well supplied with labourers, consists in planting a fourth or fifth part of their land in October, November, and December; in digging very deep trenches, for the greater nourishment of the root; in planting at great distances, for the benefit of a freer circulation of the air, and in cutting the canes in the four finest months, viz. February, March, April and May, because the sugar is then the finest, the canes are cultivated with the least trouble, and supply (as is supposed) greater quantities of it. In most parts of the West Indies, it is usual to hole and plant a certain portion of the cane land (commonly one-third) in annual succession. The common yielding of this land, on an average, is seven hogsheads of 16 cwt. to ten acres, which are cut annually.

When the canes are from seven to ten feet high, and of proportionable size, the skin smooth, dry, and brittle; if they are heavy, their pith grey, or inclinable to brown, the juice sweet and glutinous, they are esteemed in perfection. The time for cutting them is usually after twelve or fifteen months growth; but this varies according to the soil and the season.

The sugar-mill in which the canes are bruised, is very simple, and consists principally of three vertical iron-plated rollers, or cylinders, from thirty to forty inches in length, and from twenty to twenty-five inches in diameter; and the middle one, to which the moving power is applied, turns the other two by means of cogs. Between these rollers, the canes are twice compressed. The cane-juice is received in a leaden bed, and thence conveyed into a vessel called the *receiver*. The refuse or *cane-trash*, as it is called, serves for fuel to boil the liquor. Sugar-mills are worked by cattle, wind, or streams of water; and since the improved steam-engines of Mr Watt have become general, many steam sugar-mills have been sent out to the West Indies and South America.

The process for obtaining sugar is thus conducted. The juice or liquor runs from the receiver to the boiling-house, along a wooden gutter lined with lead. In the boiling-house it is received (according to the modern improved system, which almost

universally prevails in Jamaica) into one of the copper pans or cauldrons called clarifiers. Of these, there are commonly three; and their dimensions are generally determined by the power of supplying them with liquor. There are water-mills that will grind, with the greatest ease, canes sufficient for thirty hogsheads of sugar in a week. On plantations thus happily provided, the means of quick boiling are indispensably requisite, or the cane-liquor will unavoidably become tainted before it can be exposed to the fire. The purest cane-juice will not remain twenty minutes in the receiver without fermenting. As cane-juice is so very liable to fermentation, it is necessary also that the canes should be ground as soon as possible after they are cut, and great care taken to keep and throw aside those which are tainted, which may be ground for the still house. Plantations that make, on a medium, during crop-time, from fifteen to twenty hogsheads of sugar per week; on such estates, three clarifiers of three or four hundred gallons each are sufficient: with pans of this size, the liquor, when clarified, may be drawn off *at once*, and there is leisure to cleanse the vessels every time they are used. Each clarifier is provided either with a syphon or cock for drawing off the liquor. It has a flat bottom, and is hung to a separate fire chimney, having an iron slider, which being shut, the fire goes out for want of air.

The stream from the receiver having filled the clarifier with fresh liquor, and the fire being lighted, the *temper*, which is commonly Bristol-white lime in powder, is stirred into it. One great intention of this is to neutralize the superabundant acid; to get properly rid of which, is the great difficulty in sugar-making. This is generally effected by the alkali or lime; part of which, at the same time, becomes the basis of the sugar. The quantity necessary for this purpose, must of course, vary with the quality both of the lime and the cane-liquor. Some planters allow a pint of Bristol lime to every hundred gallons of liquor, but this proportion is, Mr Edwards believes, generally found too large. The lime is perceptible in the sugar, both to the smell and taste, and precipitates in the copper pans a black insoluble calx, which scorches the bottom of the vessel, and is not detached without difficulty.

As the fire increases in force, and the liquor grows hot, a scum is thrown up, which is formed of the mucilage or gummy matter of the cane, with some of the oil, and such impurities as the mucilage is capable of entangling. The heat is now suffered gradually to increase, until it rises within a few degrees of the heat of boiling water. The liquor must by no means be suffered to boil; it is known to be sufficiently heated, when the scum begins to rise into blisters, which break into white froth, and ap-

pear in general in about forty minutes. The damper is then applied, and the fire extinguished, after which the liquor is suffered to remain a full hour, if circumstances will permit, undisturbed. During this interval, great part of the feculencies and impurities will attract each other, and rise in the scum. The liquor is now carefully drawn off either by a syphon, which draws up a pure defecated stream through the scum, or by means of a cock at the bottom. The liquor is received into a gutter or channel, which conveys it to the evaporating boiler, commonly called the *grand copper*; and if originally produced from good and untainted canes, will now appear almost, if not perfectly, transparent.

The advantage of clarifying the liquor in this manner, instead of forcing an immediate ebullition, as practised formerly, is visible to the most inattentive observer. The labour which it saves in scumming is wonderful. Neither can scumming properly cleanse the subject; for when the liquor boils violently, the whole body of it circulates with such rapidity as to carry down again the very impurities that had come up to the surface, and with a less violent heat would have staid there *.

In the grand or evaporating copper, which should be large enough to receive the net contents of one

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* Edwards' History of the West Indies, Vol. 2d, p. 269.

of the clarifiers, the liquor is suffered to boil; and as the scum rises, it is continually taken off by large scummers, until the liquor grows finer and somewhat thicker. This labour is continued until, from the scumming and evaporation, the subject is sufficiently reduced in quantity to be contained in the next or second copper, into which it is then laded. The liquor is now nearly of the colour of Madeira wine. In the second copper the boiling and scumming are continued; and if the subject is not so clean as is expected, lime-water is thrown into it. This addition is intended not merely to give more temper, but also to dilute the liquor, which sometimes thickens too fast to permit the feculencies to run together, and rise in the scum. Liquor is said to have a good appearance in the second copper, when the froth in boiling arises in large bubbles, and is but little discoloured. When from such scumming and evaporation, the liquor is again sufficiently reduced to be contained in the third copper, it is laded into it, and so on to the last copper, which is called the *teache*. This arrangement supposes four boilers or coppers, exclusive of the three clarifiers *.

In the teache the subject is still further evaporated, till it is judged sufficiently boiled to be removed from the fire. This operation is usually called

* Edwards' History of the West Indies, Vol. 2d, p. 270.

striking, *i. e.* lading the liquor, now exceedingly thick, into the cooler *.

The cooler, of which there are commonly six, is a shallow wooden vessel, about eleven inches deep, seven feet in length, and from five to six feet wide. A cooler of this size holds a hogshead of sugar. Here the sugar grains, *i. e.* as it cools, it runs into a coarse irregular mass of semi-formed crystals, separating itself from the molasses. From the cooler it is carried to the curing-house, where the molasses drains from it. It may be proper in this place to observe, that in order to obtain a large grained sugar, it must be suffered to cool *slowly and gradually*. If the coolers are too shallow, the grain is injured in a surprising manner. Any person may be convinced of this, by pouring some of the hot syrup, when fit for striking, into a pewter plate. He will immediately find it will have a very small grain †.

But before we follow it into the curing-house, it may be proper to notice the rule for judging, when the subject is sufficiently evaporated for *striking*, or become fit for being laded from the teache to the cooler. Many persons guess solely by the eye (which by long habit they do with great accuracy) judging by the appearance of the grain on the back of the ladle; but the practice most in use is to judge

* Edwards' History of the West Indies, vol. 2d, p. 271.
† Ibid, p. 271.

by what is called the touch, *i. e.* taking up with the thumb a small portion of the hot liquor from the ladle; and as the heat diminishes, drawing with the fore-finger the liquid into a thread. This thread will suddenly break, and shrink from the thumb to the suspended finger, in different lengths, according as the liquor is more or less boiled. The proper boiling height for strong muscovado sugar is generally determined by a thread of a quarter of an inch long *. Another method is as follows:—"Provide "a small thin pane of clear crown-glass, set in a "frame, which I would call a *tryer*; on this drop "two or three drops of the subject, one on the other, "and carry your tryer out of the boiling-house into "the open air. Observe your subject, and more "particularly whether it grains freely, and whether "a small edge of molasses separates at the bottom. "I am well satisfied, that a little experience will "enable you to judge what appearance the whole "skip will put on, *when cold*, by this specimen, "which is also *cold*. This method is used by che-"mists, to try evaporated solutions of all other salts; "it may seem, therefore, somewhat strange, it has "not been long adopted in the boiling-house †."

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* Edwards' History of the West Indies, vol. 2d, p. 271.

† An essay on the art of making Muscovada Sugar, by John Proculus Baker, Esq. Barrister at Law, in the island of Jamaica, 1775.

The curing-house is a large airy building, provided with a capacious molasses cistern, the sides of which are sloped and lined with terras, or boards. Over this cistern there is a frame of massy joist-work without boarding. On the joists of this frame, empty hogsheads, without headings, are ranged. In the bottom of these hogsheads eight or ten holes are bored, through each of which the stalk of a plantain leaf is thrust, six or eight inches below the joists, and is long enough to stand upright above the top of the hogshead. Into these hogsheads the mass from the cooler is put, which is called *potting;* and the molasses drains through the spungy stalk, and drops into the cistern, from whence it is occasionally taken for distillation. The sugar in about three weeks grows tolerably dry and fair. It is then said to be cured, and the process is finished *.

Rum.—Having now furnished the reader with the best account I am able to give of the art of making sugar from the cane-juice, I shall proceed to give the subsequent process of extracting from it, the spirit called rum.

The still-houses on the sugar plantations in the British West Indies, vary greatly in point of size and expence, according to the fancy of the proprie-

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* Edwards' History of the West Indies, vol. 2d, p. 273.

tor, or the magnitude of the property *. In this country they may be built of bricks, which are cheap and easy to be had, and in general are equal in extent to both the boiling and curing-houses together. Large stills have the advantage over small ones, as they may be purchased at first at a less proportionate expence. Two copper stills, one of them half as large again as the other, are required. The size of the tanks (or tubs) for containing the cold water in which the worms are immersed, must depend upon circumstances: if the advantage can be obtained of a running stream, the water may be kept abundantly cool in a vessel barely large enough to contain the worm. If the plantation has no other dependance than that of pond water, a stone tank is infinitely superior to a tub, as being longer in heating; and if it can be made sufficiently large, the worms of both the stills may be placed in the same body of water, and kept cool enough for condensing the spirit, by occasional supplies of water.

For working these stills, it is necessary to provide, first, a dunder-cistern; secondly, a cistern for the scummings; lastly, twelve fermenting vats or cisterns, each of them of the contents of the largest still. In Jamaica, and in most parts of South America, cisterns are made of plank, fixed in clay; and are uni-

* Edwards' History of the West Indies, vol. 2d, p. 276.

versally preferred to vats, or moveable vessels, for the purpose of fermenting. They are not so easily affected by the changes of the weather, nor so liable to leak as vats, and they last much longer. To complete the apparatus, it is necessary to add two or more copper pumps for conveying the liquor from the cisterns, and pumping up the dunder, and also butts, or other vessels, for securing the spirit when obtained; and it is usual to build a rum-store adjoining the still-house.

The ingredients, or materials, that set the various apparatus I have described into action, consist of,

1st, Molasses, or treacle, drained from the sugar, as already described.

2dly, Scummings of the hot cane juice, from the boiling-house, or sometimes raw-cane liquor, from canes expressed for the purpose.

3dly, Lees, or as it is called in Jamaica, *dunder*.

4thly, Water.

The use of dunder in the making of rum, answers the purpose of yeast in the fermentation of flour. It is the lees or feculences of former distillations; and some few planters preserve it for use, from one crop to another; but this is a bad practice. Some fermented liquor, therefore, composed of sweets and water alone, ought to be distilled in the first instance, that fresh dunder may be obtained. It is a dissolvent menstruum, and certainly occasions the sweets with which it is combined, whether molasses or

scummings, to yield a far greater proportion of spirit than can be obtained without its assistance. The water which is added, acts in some degree in the same manner by dilution.

When these ingredients are well mixed in the fermenting cisterns, and are pretty cool, the fermentation will rise, in twenty-four hours, to a proper height for admitting the first charge of molasses, of which six gallons for every hundred gallons of the fermenting liquor, is the general proportion to be given at twice, viz. 3 *per cent.* at the first charge, and the other 3 *per cent.* a day or two afterwards, when the liquor is in a high state of fermentation; the heat of which, however, should not in general be suffered to exceed from ninety to ninety-four degrees on Fahrenheit's thermometer. The infusion of hot water will raise, and of cold water abate, the fermentation.

When the fermentation falls by easy degrees from the fifth to the seventh or eighth day, so as then to grow fine, and throw up slowly a few clear beads or air globules, it is ripe for distillation; and the liquor or wash being conveyed into the largest still, which must not be filled than within eight or ten inches of the brim, lest the head should fly, a steady and regular fire must be kept up until it boils, after which a little fuel will serve. In about two hours the vapour or spirit being condensed by the ambient fluid, will force its way through the worm in

the shape of a stream, as clear and transparent as crystal; and it is suffered to run until it is no longer inflammable *.

The spirit which is thus obtained goes by the appellation of *low wines*. To make it rum of the Jamaica proof, it undergoes a second distillation. The *low wines* obtained as above, are drawn off into a butt or vessel, and, as opportunity serves, are conveyed into the second still, to undergo a further distillation. The steam begins to run in about one hour and a half, and will give, what is called oil-proof rum, *i. e.* of spirit, in which olive oil will sink: and thus the manufacture, if it may be so called, is complete. There will remain in the still a considerable quantity of weaker spirit, which is returned to the low-wine butt.

The proportion of the whole rum to the crop of sugar, is commonly estimated in Jamaica as three to four; but on a general estimate, I think it too great an allowance, and that two hundred gallons of rum to three hogsheads of sugar, which is in the proportion of about two-thirds rum to the crop of sugar, is nearer the truth.

This will be the better understood by attending to the following particulars:—The general supply of scummings to the still-house is seven gallons out of every 100 gallons of cane-liquor. Supposing, there-

* *Edwards'* History of the West Indies, Vol. 2d, p. 280.

fore, that 2000 gallons of cane-juice is required for each hogshead of sugar of 16 cwt., the scummings on a plantation making 200 hogsheads *per annum*, will be 28,000 gallons, equal to—4666 gallons of melasses. Add the melasses from the curing-house, which, if the sugar is of a good quality, will seldom exceed sixty gallons per hogshead—12,000, making a total of 16,666 gallons of sweets. This, distilled at and after the rate of 12 *per cent.* sweets in the fermenting cistern, will give 34,720 gallons of low wines, which ought to produce 14,412 gallons of good proof rum, or 131 puncheons of 110 gallons each. When a greater proportion than this is made, one or other of these circumstances must exist, either the sugar discharges an unusual quantity of melasses, or the boiling-house is defrauded of the cane-liquor by improper scumming. This latter circumstance frequently happens.

It might be easy to rectify the spirit, and bring it to much greater purity than it is generally found to be of; for it brings over in the distillation a very large quantity of unctious or oily matter; and this is often so disagreeable, that the rum must be suffered to lie bye for a long time to mellow before it can be used; whereas, if well rectified, it would grow mellow much sooner, and would have a much less potent flavour.

It is the practice of late, with many planters, to raise the proof of rum, thus giving in strength of

spirit what is lost in quantity; and some managers make it a rule to return the scummings to the clarifiers, instead of sending them to the still-house. This last mentioned practice reduces the crop of rum more that one-third; but is supposed to yield in sugar more than is lost in rum; and if the price of sugar is very high, and that of rum very low, it may be prudent to adopt this method *.

Mr Ellis, who has resided many years on the Mosquito Shore, has a plantation with about forty negroes and a large gang of free Indians, situated near Pearl Key Lagoon, where he makes excellent sugar, and he has lately commenced the distillation of rum, which has been admitted by all who have tasted it, to be equal to the very best Jamaica.

A sugar plantation consists of three great parts; the Lands, the Buildings, and the Stock; but before I proceed to discriminate their relative proportions and value, it may be proper to observe, that the business of sugar planting is a sort of adventure in which the man that engages must engage deeply †.

It requires a considerable capital to embark in this employment with a fair prospect of advantage. Having premised thus much, I shall employ my present enquiries in ascertaining the fair price at

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* Edwards' History of the West Indies, Vol. 2d, p. 286.

† Ibid. Vol. 2d, p. 287.

which a sugar plantation may be created, and the profits which may honestly and reasonably be expected from a given capital so employed; founding my estimate on a plantation producing, one year with another, one hundred hogsheads of sugar of 16 cwt. and sixty-five puncheons of rum of one hundred and ten gallons each.

LANDS.—A plantation yielding, on *an average*, one hundred hogsheads of sugar annually, requires, as I conceive, not less than one hundred and fifty acres to be planted in canes; the whole extent of such a property must be reckoned at six hundred and forty acres, although perhaps from four hundred to four hundred and fifty might be found sufficient.

The price of lands in the territory of Poyais is, at the moment I am now writing, fixed by a decree dated 3d April 1821, at one shilling per acre, together with a feu-duty of one cent. of a dollar per acre, payable after five years from the date of purchase; but it is probable, that before six months, their price will have risen to at least five shillings an acre; therefore, for our calculation, we will take them at the present price, which for six hundred and forty acres (a square mile) will be L.32 sterling.

The cost of clearing one hundred and fifty acres, and planting them in canes, including four cleanings, would amount to L.75, at ten shillings per acre. Clearing and planting 50 acres in provisions

would be L.12 10s. at five shillings per acre; the same for clearing and planting 50 acres in Guinea grass. Inclosing and fencing the whole, would cost, on a moderate estimate, L.68 more.—Total L.200. In this estimate, it is to be observed, that I suppose 125 labourers to be employed annually on the estate; and deducting L.32, the price of the lands, that the remaining sum of L.168 is paid for extra labourage, which supposes thirty additional labourers to be employed the first three months.

BUILDINGS.—The buildings which are necessary on such a plantation are,

Sterling.

1st, A water-mill, (if water can be obtained) the cost of which may be stated at £80. In case no water-mill can be erected, a wind-mill, or cattle-mill must be built; the former will cost about £100, and the latter not more than £50. I will take the highest estimate, which is the wind-mill, or say two cattle-mills 100 0 0

2d, A boiling house, 42 by 22 feet, to contain copper clarifiers, and pans or boilers, including the cost of the same, and other utensils, - - 150 0 0

3d, A curing-house, adjoining to the boiling-house, calculated to hold one half the crop, with strong joists of solid tim-

	Sterling.		
ber instead of a floor, having a terrassed or boarded platform underneath, leading to a melasses cistern, lined with terras, sufficient to contain 300 gallons,	100	0	0
4th, A distilling-house, 70 feet by 30; the distillery part to contain 2 stills of 600 and 300 gallons, with worms proportionate, also a stone tank or cistern, to hold 15,000 gallons of water; the fermenting part to contain two, or more vats, or cisterns, for the dunder and skimmings; also 12 cisterns of solid plank fixed in the earth, of 600 gallons each, with copper pumps and other necessary apparatus; together also with a rum store under the same roof, - - -	650	0	0
5th, A dwelling-house built of brick and shingled, - - -	100	0	0
6th, A trash-house, 120 feet by 30; the foundation-stone, the sides open, the roof supported by pillars, and covered with shingles, - - -	100	0	0
7th, A store-house, - -	50	0	0
8th, A stable for mules and horses, with a corn loft above, - -	50	0	0
9th, Sheds for the waggons, wains, carts, &c. - - -	50	0	0
Add extra expences, such as the cost			

of the wains, carts, utensils, household furniture, &c. - - -	150	0	0
The total is in Sterling	£1500	0	0

STOCK.—The stock on a plantation of the magnitude described, ought to consist of about forty steers and thirty mules or horses; if there is a water-mill erected, only a small proportion of the above number will be required.—The cost of stock may be stated as follows:

40 Steers, at £2 16 0 per head,	112	0	0
30 Mules or horses at £2 16 0 per head, - - - - - -	84	0	0
	£196	0	0

Let us now bring the whole into one point of view.

Lands, - - - -	200	0	0
Buildings, - - -	1500	0	0
Stock, - - - -	196	0	0
Total in Sterling money	£1896	0	0

The produce of such a plantation has been stated at 100 hogsheads of sugar of 16 cwt. and 65 puncheons of rum, of 110 gallons, which may be worth on the spot, for internal consumption, as follows:

100 Hogsheads of sugar at £17 *per* hogshead, - - -	£1700	0	0
65 Puncheons of rum, at £12 *per* puncheon, - - -	780	0	0
Gross Returns -	£2480	0	0

From this sum, however, the annual disbursements are to be deducted, viz.

Labour and Sundry Charges.

Wages of 125 Labourers, at £13 *per annum*, for each, - -	£1625	0	0
Annual supply of mules and steers,	50	0	0
Millwrights, coppersmiths, plumbers, and smiths bills annually, -	50	0	0
A variety of small supplies and sundries, supposed, - -	100	0	0
	£1825	0	0

This sum deducted from the gross returns, leaves an annual profit of £655 per annum, from a capital of £1896, which is nearly *35 per cent.*

But the most profitable plan for a planter in this country, would be to sell his sugar and rum to his neighbours and the retail dealers, and to keep a store in the town, with a clerk for their disposal: in this way he would readily get 8s 6d *per* gallon for his rum, and £1 3s 4d *per* cwt. for his sugar; this is

even below the present prices: his profits would then be as follows, viz.

100 Hogsheads of sugar of 16 cwt. at £1 3s 4d *per* cwt. - -	£1866	13	4
65 Puncheons of rum of 110 gallons each, at 3s 6d *per* gallon,	1251	5	0
	3117	18	4
Deduct annual expences,	1825	0	0
	£1292	18	4

By this mode, the planter would obtain, after deducting the sum of £92 18s 4d for the hire of a store and the wages of a clerk, a clear income of £1200 sterling per annum, free of all taxes whatsoever.

Cotton, is the soft and beautiful down which forms the covering or envelope of the seeds of the *gossypium* or cotton plant. It is the spontaneous production of three parts of the earth, and is found growing naturally in all the tropical regions of Asia, Africa, and America; and may justly be comprehended among the most valuable gifts of a bountiful Creator, superintending and providing for the necessities of man.

The cotton wool, which is manufactured into cloth (for there is a species in the West Indies and the Americas, called silk or wild cotton, unfit for

the loom) consists of two distinct kinds, known to the planters by the names of *Green-Seed Cotton*, and *Shrub Cotton;* and these again have subordinate marks of difference, with which the cultivator ought to be well acquainted, if he means to apply his labours to the greatest advantage.

The most profitable sorts for general cultivation, are reckoned to be the Sea Island, a species of the Green-seed, the French or Small Seed, and Kidney Cotton, or Chain Cotton, which latter is supposed to be the true Cotton of the Brazils. I shall now give a short account of each.

Sea Island, is the produce of the coast of Georgia, and the small islands contiguous and belonging to it. It has a long and fine staple, but more or less silky, stained or dirty, on which account no other cotton varies so much in price. The best is preferred now to every other kind, and is often sold at very high prices to the manufacturers of lace. The produce of an acre is about 600 pounds in the seed. It is also cultivated on the pine lands, which produce three, four, or five crops without manure *.

Green-Seed, is of two species, both of which I shall describe. 1*st species*: The wool of this is so

* Warden's Account of the United States, Vol. 2d, p. 482.

firmly attached to the seed, that no method has hitherto been found of separating them, except by the hand; an operation so tedious and troublesome, that the value of the commodity is not proportionate to the pains that are requisite in preparing it for market. This sort therefore is at present cultivated principally for supplying wick for the lamps that are used in sugar-boiling, and for domestic purposes; but the staple being exceedingly good, and its colour perfectly white, it would doubtless be a valuable acquisition to the muslin manufactory, could means be found of detaching it easily from the seed.

2d Species.—This sort has larger seeds, of a duller green than the former, and the wool is not of equal fineness, though much finer than the cotton wool in general cultivation; and it is easily separated from the seed by the common method, hereafter to be described. It has been said, that this species of the green-seed cotton is not sufficiently known to the planters in general, (being usually confounded with the former) or that probably it would be in high estimation.

Both the species above-mentioned, though they produce pods at an early stage, when they are mere shrubs, will, if suffered to spread, grow into trees of considerable magnitude, and yield annual crops, according to the season, without any kind of cultivation. The blossoms put forth in succession from

October to January, and the pods begin to open fit for gathering from February to June *.

FRENCH, or SMALL SEED.—This is the cotton in general cultivation in Hispaniola. It has a whitish beard, and its staple is finer, and its produce equal to other species of the *Shrub-cotton*, as for example, the *Common Jamaica*, *Brown-Bearded*, *Nankeen*, &c. It is supposed to bear a greater number of pods than the *Jamaica*, or the *Brown-Bearded*, but it is less hardy than either †.

KIDNEY COTTON, is so called, from the seeds being conglomerated or adhering firmly to each other in the pod. In all the other sorts they are separated. The staple is good, the pods large, and the produce considerable. A single labourer may clear with ease sixty-five pounds in a day, besides which, it leaves the seeds behind unbroken, and comes perfectly clean from the rollers. It is therefore improvident, in the highest degree, to mix this species with any other ‡.

The mode of culture is the same with all the different species, and there is this advantage attending them all, that they will flourish in the driest and most rocky soils, *provided such lands have not*

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* Edwards' History of the West Indies, Vol. 2d, p. 311.

† Ibid. 312. ‡ Ibid. 313.

been exhausted by former cultivation. Dryness, both in respect of the soil and atmosphere, is indeed essentially necessary in all its stages; for if the land is moist, the plant expends itself in branches and leaves, and if the rains are heavy, either when the plant is in blossom, or when the pods are beginning to unfold, the crop is lost. Perhaps, however, these observations apply more immediately to the French cotton than to any other *.

The plant is raised from the seed, the land requiring no other preparation, than to be cleared of its native incumbrances; and the season for putting the seed into the ground is from May to September, both months inclusive. This is usually done in ranks or rows, leaving a space between each, of six or eight feet, the holes in each row being commonly four feet apart. It is the practice to put eight or ten of the seeds into each hole, because some of them are commonly devoured by a grub or worm, and others rot in the ground. The young sprouts make their appearance in about a fortnight, but they are of slow growth for the first six weeks, at which period it is necessary to clean the ground and draw the supernumerary plants, leaving two or three only of the strongest in each hole. One plant alone would be sufficient to leave, if there was any

* Edwards' History of the West Indies, Vol. 2d, p. 815.

certainty of its coming to maturity; but many of the tender sprouts are devoured by the grub. At the age of three or four months, the plants are cleaned a second time; and both the stem and branches pruned, or, as it is called, topp'd; an inch (or more, if the plants are luxuriant) being broke off from the end of each shoot; which is done in order to make the stems throw out a greater number of lateral branches. This operation, if the growth be over luxuriant, is sometimes performed a second, and even a third time. At the end of five months, the plant begins to blossom and put forth its beautiful yellow flowers, and in two months more the pod is formed. From the seventh to the tenth month the pods ripen in succession; when they burst open in three partitions, displaying their white and glossy down to the sight. The wool is now gathered, the seed being enveloped in it; from which it is afterwards extricated by a machine resembling a turner's lathe. It is called a *gin*, and is composed of two small rollers placed close and parallel to each other in a frame, and turned in opposite directions by different wheels, which are moved by the foot *. The cotton being put by the hand to these rollers as they move round, readily passes between them, leaving the seeds which are too large for the interspace be-

* It is a very slight and simple instrument, and costs only from two to three guineas.

hind. The wool is afterwards hand picked, that it may be properly cleared of decayed leaves, broken seeds, and wool that has been stained and damaged in the pod. It is then packed into bags of about two hundred pounds weight, and sent to market *.

Cotton which is indigenous of this country, might be cultivated with great success; the general average produce from an acre, may be estimated at 200 lbs. weight, which when cleaned, will fetch about £3 a hundred on the spot. "A prime slave, it is allowed, will attend to 3 acres, which will yield at the lowest calculation, an annual net profit of 240 dollars. The keeping of the slave is not included in this estimate; but as that cannot exceed the odd forty dollars, it will leave a clear profit of 200 dollars, on the labour of each slave †."

To new settlers, and to persons of moderate property, cotton presents a more easy source of revenue, even in places where the soil and climate will admit the culture of sugar ‡. The quantity of cotton produced on various soils differ greatly; many instances have occurred of two thousand pounds of cotton, with the seed, being raised in one season from a single acre of land; and a produce not much inferior

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* Edwards' History of the West Indies, vol. 2d, p. 314.

† C. Schultz's Travels in America, Am. Edit. 1810, vol. 2d, p. 186.

‡ Darby's Emigrants Guide, New York, 1818, p. 10.

has been realized from an extensive farm. But though cotton succeeds best on the deep alluvion of rivers, it is extremely profitable on the prarie land, distant from any considerable streams of water *.

I shall now proceed to make a few observations on the culture and produce of cotton.

There is no known vegetable capable of being brought to perfection on so great a variety of soils †. The time of planting cotton varies with the particular climate. It is planted either in drills or squares; the former is generally considered the most productive mode ‡.

In all cases a much greater quantity of seed is planted than is supposed to produce stalks. The number of stalks permitted to remain depends upon the strength of the soil; but from the branching nature of the plant, the stalks are, on every kind of land, left at a considerable distance from each other §.

The manner of planting, ploughing, hoeing, and weeding cotton, differs but little from the same necessary routine of labour in cultivating maize. The former, from its humble height, suffers more from weeds than the latter. Cotton is also in its first stages much more slow of growth than maize ‖.

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* Darby's Emigrants Guide. New York, 1818. p. 10.
† Ibid. p. 178. ‡ Ibid. § Ibid. ‖ Ibid.

The time that elapses from the planting to the commencement of gathering cotton, does not vary very much from four months, or about one hundred and twenty days. It has been observed by an experienced traveller, that cotton will grow upon every variety of land, upon which any useful vegetable can be cultivated *.

Gathering the cotton is entirely done by the hand, and demands great care in the operation, a circumstance which, in the natural history of cotton, contributes to render its collection, free of dead leaves, difficult and tedious †.

The quantity of cotton that can be made upon, and collected from an acre, differs greatly. Below 33° North Latitude, one thousand weight is considered about a medium. The relative weight of seed and down is about three-fourths of the latter, to one-fourth of the former; therefore, 250 lbs. of clean cotton would be the medium produce of an acre.

A labourer will cultivate with ease, more than twice as much cotton as he can collect. There is no manual labour done by man, where the quantum that is performed by different men, of equal strength, differs so greatly as in picking cotton. The ordinary amount allowed for a day's work, is between fifty

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* Darby's Emigrants Guide. New York, 1818, p. 178.

† Ibid.

and sixty pounds: two hundred has been collected by one person in a day. Darby says he has seen children collect more cotton into baskets than they were able to carry to the place of deposit. It may indeed be justly considered as one of the excellencies of the culture of cotton, that in its collection no manual labour is lost. Neither age nor childhood, if in health, is prevented from giving its aid in this innocent and useful pursuit. Children from eight years old can be employed to advantage.

The bale varies in weight: 320 lbs. is a medium. That farm produces well, where three and a half bales of this size are made to each hand; four such bales is an excellent crop *.

It must be understood, however, that the same labourers raise maize, plantains, cassada, sweet potatoes, yams, and other vegetables for nourishment. From the ability of cultivating more cotton than can be collected by the same labourers, leisure is also given to cultivate vegetables for food.

I shall now bring into one point of view the several particulars attending the first cost and settlement of a plantation in this sort of husbandry, and the return which may reasonably be expected from a small capital thus employed. I fix on a small capital; because I conceive that a cotton planta-

* Darby's Emigration Guide, p. 178.

tion may be established on a more moderate fund than any other *.

It is presumed that land proper for the growth of cotton, situated near the sea, may be purchased, in the territory of Poyais, at the present selling price of one shilling per acre; and as it is prudent in most cases, to change the soil after the third crop, by replanting fresh land, I will allot one hundred and sixty acres (a quarter section) for the first purchase, in order that the planter may have room for that purpose. Supposing, therefore, that twenty-five acres only is planted in cotton at the same time, the capital will be invested as follows:

Cost of one hundred and sixty acres of land, at one shilling *per* acre -	£8	0	0
Expence of clearing, fencing, and planting 25 acres, at ten shillings *per* acre - - - - - -	12	10	0
	£20	10	0
Provisions, implements, and sundry small articles, say - - -	9	10	0
Total,	£30	0	0

The returns are now to be considered. In Poyais, it is calculated that one acre of cotton will yield from 200 to 350 pounds annually, and 250 lbs.

* Edwards' History of the West Indies, vol. 2d, p. 317.

may be considered the medium average, and is safely estimated at 8d. sterling *per* pound. The returns, therefore, according to this data, upon such a plantation as we have described, will be as follows, viz.

6250 lbs. of cotton, at 8d. sterling *per* pound - - - - - - -				£208	6 8
Deduct incidental expences, as materials for bagging, &c.	£13	6	8		
Deduct wages of 8 labourers, at £13 each, per annum - - -	104	0	0		
				117	6 8
Remains in sterling money,				£91	0 0
To which may be added, the sale of surplus provisions, as yams, plantains, maize, cotton seed-oil, &c. say -				9	0 0
				£100	0 0

Cotton is packed in the West Indies, in bags, from 300 to 320 lbs. weight each, and the tare allowed there is 3 per cent *.

In the United States, one-fourth of the amount is allowed for the expence of cleaning cotton from the seed, the purchase of duck and cordage, and transpor-

* Mortimer's Commercial Dictionary, 2d edit. 1819, art. Cotton.

tation to market. "From individual experience, the "author of this treatise is fully convinced, that this "is an ample allowance if taken generally *." For the territory of Poyais, the allowance I have made for bagging, &c. will be found amply sufficient.

The quantity of oil that cotton-seed will give, has never been determined with sufficient accuracy. The proportion of clean *cotton* wool to that of the crude mass, including the seed, has been found very nearly to be as one to four. Persons holding cotton-gins are obliged to deliver one lb. of clean cotton for every four lbs. of the mass in seed, for which the receipts are given. One hundred pounds of seed, is allowed to produce one gallon of oil †.

From the data given above, it appears that an active industrious emigrant, arriving in this country with about £150 sterling, would in twelve months create a cotton plantation, that would yield him £100 *per* annum, with the certain prospect of every year being able to extend it, and so in proportion augment his capital and income. It should also be observed, that there are merchants, who will advance an industrious settler, such goods as he may require, on a twelvemonth's credit, taking his cotton in payment at a fair price; and as the Indians prefer being paid in goods to money, the emigrant who arrives with only L.30 in his pocket, may raise

* Darby's Emigrant Guide, p. 181. † Ibid.

a similar estate, if he can get credit with the merchant to the amount of L.117, 6s. 8d.: but suppose he only gets it for half the sum, this will enable him to employ four labourers, and cultivate twelve or thirteen acres in cotton, which will yield, after making a fair allowance of L.10, for the difference between goods bought with ready money, and those obtained on a long credit, an annual income of L.40 sterling, on a capital of thirty pounds.

In Nile's Weekly Register, published at Baltimore, for July 1819, is the following curious calculation:—"Ten slaves, five of them capable of "working in the fields, the other five, women and "children, will produce of cotton annually, about

lbs. 6,500

"At this rate 100,000 would produce 85,000,000

"Which at 13 cents. *per* lb. amount to D.11,050,000"

In the same work for July 1820, is the following calculation:—"We now proceed to state the situa- "tion of an extensive cotton manufactory, in the "neighbourhood of Boston, which is in actual ope- "ration.

"It contains Men - 14

"Women and Children 286

300

"And produces, with the power of looms and other "machinery, at the rate *per* annum of 1,250,000 "square yards of cloth.

	Dollars
" Which at 25 cents *per* yard is -	312,500
" Deduct 450,000 lbs. of cotton, at 16 cents	72,000
" Annual saving of the nation by the " labour of 14 men and 286 women " and children,	d.246,500

N.B. In the above statement the expences of the establishment is not given, but we might calculate it at 40,500 dollars, which would leave a profit upon the capital (whatever that may be) of 200,000 dollars.

Let us now calculate the result of the labour of 100,000 men, women and children, in the same proportions, and at the same kind of employment. As 300 : 240,500 : : 100,000 : 80,166,666 dollars.

That is to say, the clear profit of the labour of 100,000 persons, employed in the cotton manufactory, would amount to above eighty millions of dollars annually, after paying for the raw material *.

INDIGO.—The plant which yields the valuable commodity, called Indigo (probably so named from India, where it was first known to be manufactured), grows spontaneously in this country. In the British Sugar Islands, they reckon three distinct species; the Wild †, Gautemala ‡, and French §.

* Nile's Weekly Register, July, 1820.

† *Indigofera Argenta*, Linn.

‡ *Indigofera Disperma*, Linn.

§ *Indigofera Tinctoria*, Linn.

The *Wild* indigo has short crooked pods and black seeds; the *Guatemala* is distinguished by the redness of the stalk, and the colour of the seeds, which are green: the *French* is a short bushy plant, with roundish leaves, long crooked pods, and its seeds are yellow. The first is said to be the hardiest, and the dye extracted from it is supposed to be of the best quality, both in colour and closeness of grain, but one of the other two species is commonly preferred by the planter, as yielding a greater return; and of these, the French surpasses the Guatemala in quantity, but yields to it in fineness of grain, and beauty of colour *.

" That the richest soil produces the most luxu-
" uriant plant, and that good seasons accelerate its
" growth, cannot I think be doubted; but, observ-
" ing its long tap-root, and spontaneous growth,
" in almost every dry and barren savannah, I am
" convinced it will thrive on soils that are fit for
" nothing else. The longest dry weather will not
" totally kill it, though much water will have that
" effect, if suffered to remain long on the plant †."

The cultivation and manufacture are conducted in the following manner.

The land being properly cleared of weeds, &c. is hoed into small trenches of two or three inches in

* Edwards' History of the West Indies, vol. 2d, p. 325.
† Ibid.

depth, and twelve or fourteen inches asunder; in the bottom of which the seeds are strewed by the hand, and covered lightly with the earth taken out: a bushel of seed is sufficient for four or five acres of land. During the progress of vegetation, the ground must be carefully weeded, in order to prevent any mixture of herbs, which would injure the indigo in its manufacture. In moist weather, the plant comes up in three or four days; and in about two or three months after, it is fit for cutting: if suffered to stand till it runs into flower, the leaves become too dry and hard, and the indigo obtained from them proves less in quantity, and less beautiful; the due point of maturity is known, by the leaves beginning to grow less supple, or more brittle. In rainy seasons, the cutting may be repeated every six weeks: cutting in dry weather kills the plant, which if that is avoided, continues to afford fresh crops for two years. The ratoons or subsequent growths from the plants, ripen in six or eight weeks; but the produce diminishes fast after the second cutting, so that it is absolutely necessary to sow the seeds anew every year.

The produce *per* acre of the first cutting, will be about eighty pounds weight of what the French call *pigeon's neck*; or about sixty pounds of a quality equal to the Guatemala. The produce in North America is sometimes nearly as much; but when Fahrenheit's thermometer falls to 60°, the re-

turns there are very uncertain, both in quality and quantity; a greater heat being absolutely necessary both for vegetation and maceration. The yielding for the subsequent cuttings somewhat diminishes; but in Jamaica and St Domingo, if the land is new, about 300 lbs. *per* acre of the second quality may be expected annually, from all the cuttings together, and four negroes are sufficient to carry on the cultivation of five acres, besides doing other occasional work, sufficient to reimburse the expence of their maintenance and clothing *.

The process for obtaining the dye is generally conducted in two cisterns, which are placed like two steps, the one ascending to the other. The highest (which is also the largest) is called the *steeper;* and its dimensions are about sixteen feet square, and two feet and a half in depth. There is an aperture near the bottom, for discharging the fluid into the second, which is called the *battery* or *beater,* and is commonly about twelve feet square, and four and a half in depth. Cisterns of these dimensions are proper for about seven acres of the plant; but if stone-work cannot easily be erected for want of materials, vats made of brick, and plastered with a composition of cement in the inside, may be substituted, or if constructed of strong timber, well se-

* Edwards' History of the West Indies, vol. 2d, p. 327.

cured from leakage, they will answer as well. There is also required a lime-vat, six by eight feet square, and four feet deep; and it may be proper to observe, that the tap or plug-hole ought to be placed at least eight inches from the bottom, to leave sufficient room for the lime to subside, before the lime-water is drawn off into the battery.

The plants are cut with reap-hooks or sickles, a few inches above the root, and leaving a few branches on the stem. This will draw up the sap better, and produce a more luxuriant ratoon, than where a naked stalk is left. During the first cutting, it is usual to leave some of the most flourishing stalks for seed, which ought not to be gathered until it is well hardened in the pod. It generally requires ten bushels of the pod to produce a single bushel of clean dry seed, fit for sowing.

A large quantity of the plant is placed by *strata* in the steeper, until it is about three parts full. They are then strongly pressed down with boards, which are wedged or loaded, to prevent the plants from buoying up; and as much water is admitted as the weed will imbibe, until it is covered four or five inches deep, and in this state is left to ferment, until the pulp is extracted. The matter begins to ferment, sooner or later, according to the warmth of the weather, and the maturity of the plant, sometimes in six or eight hours, and sometimes not in less than twenty. The liquor grows

hot, throws up a plentiful froth, thickens by degrees, and acquires a blue colour, inclining to violet. In proportion as the caloric increases, azote is disengaged, and the herbaceous mucilage separated, the vegetable is decomposed, and the mixture absorbs oxygen. The fermenting fluid passes from a green to a violet tinge, and this by degrees changes to a blue colour. The great art of the manufacture is to check the fermentation at a proper degree. If the fermentation is too feeble or too brief, the plant remains impregnated with much essential salt, which diminishes the quantity of indigo. If it be too long, the tender extremities of the plant undergo a putrefaction, which destroys the colour. Some years ago, the following criterion was published at St Domingo, for ascertaining invariably the correct fermentation of the indigo. It is only requisite to write on white paper with the matter to be examined. If this ink be of very high colour, it is a proof that the fermentation is not yet at its true point. The experiment is repeated every quarter of an hour, till it is perceived that the liquid has lost its colour. This was pronounced an infallible index to shew the true point of fermentation. When these signs are perceived, they indicate the success of the operation. At this time, without touching the herb, the liquor impregnated with its tincture is let out, by cocks in the bottom, into the other vat, called the battery.

In the second vat, the liquor is strongly and incessantly beat and agitated, with a kind of buckets fixed to poles, till the colouring matter is united into a body; a more convenient machine has been constructed, in which the levers are worked by a cog wheel, and kept in motion by a horse or mule. A good deal of nicety is requisite in hitting this point; if the beating is ceased too soon, a part of the tinging matter remains dissolved in the liquor; if continued a little too long, a part of that which had separated is dissolved afresh. The exact time for discontinuing the process is determined by taking up some of the liquor occasionally in a little cup, and observing whether the blue *fœculæ* is disposed to separate and subside.

The facility with which the grain precipitates to the bottom of the beater, is an unequivocal sign that the beating has arrived at the correct point.

The liquor being properly and sufficiently worked, and the pulp granulated, it is left undisturbed until the flakes or *fœculæ* settle at the bottom, when the incumbent water is drawn off, and the indigo distributed into small linen bags to drain, after which it is carefully put into little square boxes or moulds, and suffered to dry gradually in the shade, and this finishes the manufacture.

However well drained and dried the indigo may be, it always experiences, in the first month of its fabrication, a diminution sufficiently evident to

warrant a hastening of the sale. It is customary to pack the indigo into barrels, and thus to circulate it in commerce. Indigo is also packed in sacks of coarse linen, and the sack is then covered with an ox's hide, having the seams so hermetically sewed and tarred that nothing can penetrate it. These packets are called *ceroons*, and they are much preferable to barrels, as they are more solid, and more convenient for transportation. Two ceroons make the load of a mule. In this way the indigo is packed for market in the kingdom of Guatemala, and in all parts of Spanish America.

Indigo is commonly divided, from the colour which it exhibits upon breaking, into three kinds, copper-coloured, purple, and blue. Good indigo is moderately light, breaks of a shining surface, and burns almost wholly away upon a red hot iron. It is quickly penetrated by water, and reduced into a kind of paste; a considerable part is at the same time diffused through the liquor, and very slowly subsides.

Berthollet speaks of the indigo from Guatemala as the best of any; as it is so light as to swim on the surface of the water, instead of sinking to the bottom, as all the other kinds do. The different qualities of Spanish American indigo are expressed by the three terms, *Flora*, *Sobres*, and *Cortes*, whereof the first is the best, and the last the worst.

" To what has been said above of the nature of

" the plant, suiting itself to every soil, and produc-
" ing four cuttings in the year, if we add the cheap-
" ness of the buildings, apparatus, and labour, and
" the great value of the commodity, there will seem
" but little cause for wonder at the splendid ac-
" counts which are transmitted down to us concern-
" ing the great opulence of the first indigo planters.
" Allowing the produce of an acre to be 300 lbs.
" and to produce no more than 4s. sterling *per*
" pound, the gross profits of twenty acres will be
" £1200, produced by the labour of only sixteen
" negroes, and on a capital in land and buildings,
" scarce deserving consideration *."

One of the greatest drawbacks formerly in the *manufacture* of indigo, was the pernicious effects of the vapour arising from the fermented liquor; which is now entirely removed by an improved method of extracting the indigo *by means of a boiling process*; " By the scalding process (observes Dr Rox-
" burgh) I have always on a small scale made from
" the common indigo plant, better indigo than I
" could by fermentation, and in one fourth of the
" time; and what is also of great importance, with-
" out the smallest degree of the pernicious effluvia
" which attend the manufacture of indigo by fer-
" mentation, and moreover, the twigs and leaves
" themselves of the indigo plant burn fiercely, after

* Edwards' History of the West Indies, Vol. 2d, p. 332.

" having been well dried, and will carry on the " operation without requiring any great addition of " other fuel."

In another place, Dr Roxbury observes, " that " the Hindoos throughout the northern provinces or " circars, make *all* their indigo by means of hot " water, and precipitate with a cold infusion of the " bark of the *jambolong* tree; yet notwithstanding " the inferiority of this bark as an astringent, when " its effects are compared with those of lime water, " I have always found their indigo to be of a very " excellent quality, and very light; a cubic inch " weighing only about 110 grains, and being of a " blue violet colour. The superior quality of this " indigo must alone be imputed to the nature of this " process, by which the colour, or rather base of the " colour, is extracted from the plant; for their ap- " paratus is very inconvenient."

" Besides the superior quality of the indigo obtain- " ed by the scalding process, the quantity is gene- " rally increased by it, moreover the health of the " labourer in this way is not endangered; as in the " fermenting process, by constant and copious ex- " halations of putrid miasma: the heat employed " expels most of the fixed air during the scalding, " which renders a small degree of agitation, and " very little of the precipitant necessary. The " operation can also be performed two or three times " a-day upon a large scale; and lastly, the indigo

" itself dries quickly without acquiring any bad " smell, or putrid unwholesome tendency *."— Surely these observations deserve the most serious attention of the planters in the British West Indies †!

I shall conclude my account of this valuable plant, with an estimate of the expence of an Indigo plantation, and the probable revenue arising from it, and with observing that it is one of the articles of produce, which is most deserving of the emigrants attention, from the small capital required in establishing a plantation, the simplicity and cheapness of the manufacture by the scalding process, and the high price, together with the great and constant demand of the article; the quantity of indigo annually imported into Great Britain from all parts of the world, being, I believe, one million and a half of pounds, of which five parts in seven are purchased of foreigners.

Estimate of the Expence of an Indigo Plantation. Cost of 160 acres of land (a quarter section,) at one shilling *per* acre,	£8	0	0
Expence of clearing, fencing and planting 20 acres, at ten shillings *per* acre, - - - - - -	10	0	0

* Bancroft's Philosophy of Permanent Colours.

† Edwards' History of the West Indies, Vol. 2d, p. 337.

Building a dwelling-house, cisterns, tanks, &c. - - -	32	0	0
	£50	0	0

Produce.

20 acres at 300 lbs each is 6000 lbs. which at 4s sterling *per* pound, will give, - - - - -	£1200	0	0
Deduct the wages of 16 labourers at £13 each *per* annum, - -	208	0	0
	£992	0	0

Leaving a clear profit nine hundred and ninety two pounds upon a capital of £258. But it is to be observed, that as the settler, at the end of the first six months, will have sold a portion of his crop, he would only require a capital of about *one hundred and fifty pounds*, to realize an income of almost *one thousand pounds* sterling *per* annum!

COFFEE.—Its true name, according to Bruce, is caffé, from Caffa, the south province of Narea in Africa, where it grows spontaneously in great abundance. It is a fruit approaching to an oval or semi-oval form; smaller than a horse-bean, and is of a tough, close, and very hard texture. When deprived of its parchment covering, it is found to be prominent on one side, and flatted on the other, with a large deep furrow, which runs

along the flattened side. It is moderately heavy, hard to break before it is roasted, and is of a pale greyish colour.

A rich deep soil, frequently meliorated by showers, will produce a luxuriant tree, and a great crop; but the beans which are large, and of a dingy green, prove for many years, rank and vapid. It is singular, however, that the North Americans prefer this sort to any other *. Coffee indeed will thrive in every soil in the West Indies; a cold stiff clay, and a shallow mould on a hot marle, excepted. In both which the leaves turn yellow, and the trees perish, or produce nothing; but the best and highest flavoured fruit is unquestionably the growth of either a warm gravelly mould, or sandy loam. Frequent showers of rain, are friendly to its growth, but if water remains long about the roots, the tree will decay and perish.

If the land be fresh and naturally good, coffee plants may be set out at all seasons of the year, even in dry weather, and they will thrive in any situation, provided it be screened from the north winds, which often destroy the blossom; and sometimes, in the after part of the year when those winds prevail most, entirely strip the tree of both fruit and leaves.

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* Edwards' History of the West Indies, vol. 2d, p. 339.

The usual mode of planting is to sow the seeds, or to set out the young plants, eight feet distant from each other on all sides, which gives six hundred and eighty trees to an acre; and when young plants are easily procured they are preferred to berries. The plants which are intended to be set out are generally selected of about three feet in height. They are cut off about two inches above the surface of the ground, and care is taken to dig them up with the roots as entire as possible. The holes in which they are set, are made large enough to hold the lower part of the stem and all the roots; and the upper fibres are buried about two inches under the surface. But although eight feet be the usual distance of setting out the plants in all soils, it is frequently found in rich lands, that the trees, as they grow to maturity, become from their luxuriance, so closely intermingled together, as to impede the free passage of the air; in such case it is thought adviseable to cut down every second row within ten or twelve inches of the ground, and by well moulding the stumps, they will furnish a succession of healthy young trees, while the rows which are left will bear much better for the room which is given them.

In the cultivation of a young walk, the general and most approved system is to keep the trees perfectly clear of suckers, and to rear one stem only from each root. If, therefore, a healthy shoot

springs up near the ground, all the original plant is cut off close above it, by which means, when the plant is moulded, the root becomes well covered. At the height of five or six feet, which the plants generally attain the third year, the trees are topped. At this height, a single stem gives from thirty to forty-two bearing branches, and the pruning required annually, is to leave nothing but those branches *.

From what has been said concerning the effect of a difference of seasons, it must be difficult to fix on the average produce of a coffee plantation by the acre. In rich and spongy soils, a single tree has been known to yield from six to eight pounds of coffee: I mean when pulped and dried. In a different situation, a pound and a quarter from each tree, on an average, is great yielding; but then the coffee is infinitely better in point of flavour. The following is, I believe, on a medium, as accurate a calculation as the subject will admit. Coffee trees raisgd from old trees, in lands neither very poor or very rich, bear the second year from the new growth 300 pounds weight *per* acre; 500 pounds the third year; and from 600 to 700 pounds the fourth. If the trees are raised from young plants, no produce is to be expected until the third year from the planting, when they will yield very little; the fourth year about 700 pounds. The average annual

* Edwards' History of the West Indies, vol. 2d, p. 342.

produce *per* acre, after that period, if the walk is properly attended to, may be reckoned at 750 pounds; and one person is well able to take care of an acre and a half.

As soon as the berries acquire the colour of a black-red on the trees, they are supposed to be sufficiently ripe for picking. The labourers employed in this business are provided each with a canvass bag, with a hoop in the mouth to keep it open. It is hung about the neck of the picker, who empties it occasionally into a basket, and if he be industrious, he may pick three bushels in the day. But it is desireable he should take time, otherwise a great deal of unripe fruit will, in that case, be mixed with the ripe. The usual practice is to pick the trees at three different stages of ripeness. One hundred bushels in the pulp, fresh from the tree, will give about one thousand pounds weight of merchantable coffee.

There are two methods in use of curing or drying the bean: the one is, to spread the fresh coffee in the sun, in layers about five inches deep, on a sloping terras, or platform of boards, *with the pulp on the berry*, which in a few days ferments, and discharges itself into a strong acidulous moisture, and in this state the coffee is left, until it is perfectly dry, which, if the weather is favourable, it will be in about three weeks. The husks are afterwards separated from the seeds by a grinding-mill, hereaf-

ter to be described, or frequently by pounding them with pestles in troughs or large wooden mortars. Coffee thus cured, weighs four *per* cent. heavier, than if cured with the pulp *.

The other method is to *remove the pulp* immediately as it comes from the tree. This is done by means of a pulping-mill, consisting of a horizontal fluted roller about eighteen inches long, and eight inches in diameter. This roller is turned by a crank or handle, and acts against a moveable breast-board, which being fitted close to the groves of the roller, prevents the berries from passing whole. The mill is fed by a sloping trough, and the aperture of the trough, from which the berries drop into the mill, is regulated by a vertical sliding board. By this simple machine a man will pulp a bushel in a minute. The pulp and the bean (in its parchment skin) fall promiscuously together. The whole is then washed in wire sieves, to separate the pulp from the seeds, and these are immediately spread open to the sun to dry. There yet remains the operation of grinding off the parchment skin, or membrane which immediately envelopes the bean, and is left after the pulp is removed. It is done by a machine which will also separate, at the same time, the dried pulp (if the former mode of curing has been adopted) much more expeditiously than the pestle and mortar.

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* *Edwards'* History of the West Indies, vol. 2d, p. 345.

The grinding mill consists of a perpendicular axis, surrounded at some distance by a circular trough, into which the coffee is thrown, and about a foot above the level of the surface of the trough, there are commonly four horizontal arms or sweeps, tenanted into the axis, and stretching some feet beyond the trough, and on these are four rollers, fitted to run in the trough, on the arms being turned round with the axis, which is done by mules, or horses yoked to the extremity. The rollers, which are generally of considerable weight, moving round in the trough, bruise the skins of the coffee, so as to render them separable by the fans, though there is always a proportion left untouched. When it appears sufficiently bruised, it is taken out of the trough and put to the fan, which cleans the coffee from the chaff, and the seeds remaining unground are separated by sieves, and returned to the mill, which will clear 1,500 pounds of coffee in a day.

I shall conclude by offering an estimate of the expences and returns of a coffee plantation.

EXPENCES.

First cost of 640 acres of land, of which 150 acres is planted in coffee, and the same quantity in provisions, &c.	£32	0	0
Clearing, fencing and planting 150 acres at 10s. *per* acre - - -	75	0	0
Carry over	£107	0	0

Brought over			£107	0	0
Twenty mules or horses at £3 *per* head			60	0	0
Buildings and mills, utensils and tools			200	0	0
Expence of 50 labourers at £13 each, and 50 women and children at £6 10s each for three years			2850	0	0
			£3217	0	0
Returns the fourth year at £4 4 0 *per cwt. of* 112 *lbs.*					
From 150 acres of young coffee may be expected the fourth year 45,000 lbs.			£1687	10	0
Deduct annual charges for the fourth year	£950	0 0			
Sacks and saddles	40	0 0			
			990	0	0
Clear profit			£697	10	0
Returns the fifth and subsequent years; viz.					
150 acres, yielding 750 lbs. *per* acre, —112,500 lbs. at £4 4 0 *per* cwt.			4219	0	0
Deduct annual charges as before	£950	0 0			
Sacks and saddles	80	0 0			
Repairs of mills, &c.	60	0 0			
			1090	0	0
Clear profit			£3129	0	0

From which it appears that, by the fifth year, a clear income of £3129 may be expected from a capital of £3217. But as few emigrants can be expected to command, or be able to afford to lay so long out of so considerable a capital, I would recommend to such as are desirous of establishing a coffee plantation, to commence by degrees, and with some other article of culture at the same time, as indigo, or cotton, for instance, and employing the profits arising from the cultivation of one or other of these articles, in the gradual establishment of a coffee walk.

Cacao.—The cacao or chocolate nut is the production of a tree, common in the West Indies and the tropical regions of the American continent. It is indigenous of this country, where it grows to the height of from fifteen to twenty feet. The chocolate-tree begins almost from the ground to separate itself into four or five stems, according to the vigour of the root from whence they all proceed: they are commonly between four and seven inches in diameter; but they first grow in an oblique direction, so that the branches are expanded and separated from one another.

The length of the leaf is between four and six inches, and its breadth from three to four: it is very smooth, soft, and terminating in a point, like that of the China-orange-tree, but differing from it in colour: the former being of a dull green, and

having no gloss, which is observable on the latter; nor is the tree so full of leaves as that of the orange. "The cacao tree," says Mr Edwards, "both in "size and shape, somewhat resembles a young *black-* "*heart* cherry. The flower is of a saffron colour, "extremely beautiful, and the pods which in a "green state are much like a cucumber, proceed im- "mediately from all parts of the body and larger "branches. As they ripen, they change their co- "lour, and turn to a fine bluish-red, almost purple, "with pink coloured veins. This is the common "sort; but there is a larger species, which produ- "ces pods of a delicate yellow or lemon colour. * "

The pods that contain the cacao, grow from the stem, as well as from the branches. The colour of the pod, while growing, is green, like that of the leaf: but when arrived at its full perfection, it gradually changes to a darkish red. When the fruit is arrived at its full growth, and cut in slices, its pulp appears white and juicy, with the seeds, or nuts, regularly arranged, and at that time of little greater consistence than that of the pulp, but whiter, and enclosed by a very delicate membrane; these are of an oblong figure, resembling a large olive in size and shape, but rather thinner in proportion to its length, and in some degree approaching to the almond or pistachia-nut: it is larger however than either of

* Edwards' History of the West Indies, vol. 2d, p. 363.

these. Each pod may contain from twenty-five to thirty of these nuts or kernels, which are immediately enveloped in a parchment shell.

The chocolate-nut, when dried, is found composed of a thin, but hard and woody coat or skin, of a dark blacking colour, and of a kernel within this, filling up its whole cavity, fleshy, dry, firm, and flattish to the touch, of a dusky brown colour, with a mixture approaching to red on the surface, and of a greyish brown within. It is composed of several irregular and unequal parts, which, however, cohere firmly enough together, and it is of a very fragrant and agreeable smell, and of a pleasant and peculiar taste, with something of the acerb in it. The nuts quickly lose their power of vegetation, if taken out of the capsule, but kept in it, they preserve that power for a long time. The tree bears leaves, flowers, and fruit, all the year through; but the usual seasons for gathering the fruit are June and December.

This is almost the only tree in nature to which the enlivening beams of the sun are obnoxious. It requires to be sheltered from their ardour; and the mode of combining this protection with the principles of fertility forms a very essential part of the talents which its cultivation demands. The cacao-tree is mingled with other trees, which guard it from the rays of the sun, without depriving it of the benefit of their heat. The *erythrina* or bean-

tree, and the *banana*, are employed for this purpose. The latter, by the rapidity of its growth, and the magnitude of its leaves, protect it for the first year. The erythrina endures at least as long as the cacao; it is not every soil, however, that agrees with it. It perishes after a while in sandy and clayey soils, but it flourishes in such as combine those two species *.

In Spanish America, where the cacao forms a considerable article of commerce, its cultivation is conducted in the following manner. Having chosen a spot of level land (a deep black mould is preferred) sheltered round with a thick wood, so as to be well screened from the wind, especially the north, and caused it to be cleared from all manner of stumps and weeds, the planter digs a number of holes at eighteen or twenty feet distance, each hole being about a foot in length and width, and six or eight inches deep. In the mean time, having selected the largest and fairest pods of the cacao when full ripe, he takes out the grains and puts them into a vessel of water. Such of them as swim are rejected; the others, being washed clean from the pulp and skinned, are suffered to remain in the water till they begin to sprout, at which time they are fit for planting. The planter then takes the banana, or some other large leaves, and places one leaf within the circumference of each hole, so as to line it round; leaving however

* *Depons'* Travels in South America, vol. 1st, p. 393.

the sides of the leaf some inches above the ground, after which he rubs in the mould, very lightly, till the hole is filled. He then selects three nuts for each hole, and plants them triangularly, by making a small opening for each with his finger, about two inches deep, into which he puts the nuts, with that end downwards from which the sprout issues; and having lightly covered them with mould, he folds over the leaf, and places a small stone on the top to prevent its opening. In this manner he plants his whole walk, or orchard. At the end of eight or ten days, the plants will generally be found to rise above the earth. The leaves are then opened, that their growth may not be impeded; but, in order to shelter them from the sun, other leaves or branches are placed round the hole; for which purpose those of the palm kind are generally chosen; and they are changed as often as they decay, for the space of five or six months.

If all the three nuts placed in each hole spring up, it is thought necessary, when the plants are about eighteen inches high, to cut at least one of them down. The other two, if they spread different ways, are sometimes suffered to remain; but it seldom happens that all the nuts, or even more than one of them, will take root, which is the reason of planting three in a hole *.

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* Edwards' History of the West Indies, Vol. 2d, p. 361.

When the bananas grow old, they should be carefully felled, lest the cacao-trees should be injured by their accidental fall. They are to be totally removed as soon as the erythrinas yield sufficient shade; this operation gives more air to the trees of the plantation, and encourages their growth *.

Until the cacao plant attains four feet in height, it is trimmed to the stem. If it shoots forth several branches, they are reduced to three at equal distances; and in proportion as the plant increases, the leaves which appear on the three branches are stripped off. If they bend much, and incline towards the earth, they are tied in branches, so that the tree may not remain crooked. The branches which are trimmed are cut at the distance of two fingers from the tree. The suckers which spring from the tree are also removed, as they only live at its expence †.

In two years from the seed, the tree is above three feet high, and spreads its branches, not more than five of which are suffered to remain. Before its third year is complete, it shews for fruit. The fifth year the tree begins to bear, and the eighth attains its full perfection: it then produces in general two crops of fruit in the year, yielding at each, from ten to twenty pounds weight, according

* Depons' Travels in South America, vol. 1st, p. 396.
† *Ibid.* vol. 1st, p. 396.

to the soil and seasons; and it will sometimes continue bearing for twenty years; but the same delicacy of stamina which marks its infancy, is visible in all the stages of its growth. It is obnoxious to blights, and shrinks from the first appearance of drought *.

It is necessary that a cacao plantation should have always shade and irrigation; the branches of the plant should be cleared of the scurf that forms on them; the worms should be destroyed; no large herbs or shrubs should be permitted to grow; since the least disadvantage resulting therefrom would be the loss of all the fruit that should fall into these thickets. But it is most essential to deepen the trenches which carry off the water, in proportion as the plant increases in size, and as the roots of course pierce deeper: for if the trenches are left at a depth of three feet, while the roots are six feet in the earth, it follows that the lower part of the cacao plant is in a situation of too great humidity, and rots at the level of the water. This precaution contributes not only to make the plantation more durable, but also to render the crop more productive. It is necessary also to abstain from cutting any branch from cacao plants already in a state of produce. Such an operation might occasion the subsequent crop to be stronger; but the

* Edwards' History of the West Indies, vol. 2d, p 361.

plants become enervated and often perish, according to the quality of the earth, and the number of branches cut off*.

The cacao gives two principal crops in a year, one about St John's day, the other towards the end of December. The cacao also ripens and is gathered during the whole year. But in all seasons, the people of Terra Firma make it a point, as far as possible, to collect their crops only at the decline of the moon; because, say they, experience proves that this precaution renders the cacao more solid, and less liable to spoil †.

After gathering the ripe fruit, it is opened, and the kernels struck out with a small piece of wood, which must not be sharp, lest it injure the grain; they are then laid on skins kept for that purpose, and left in the air to dry.

The good and bad cacao must not be mingled together. There are four sorts of cacaos in every crop; the ripe and in good condition; the green but sound; the worm-eaten and the rotten; the first quality is the best, the second is not bad; but the two others should be rejected ‡.

The cacao must always be exposed to the sun, on the fourth day after it has been gathered, and this exposure should be daily repeated until it is

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* Depons' Travels in South America, vol. 1st, p. 400.

† Ibid. p. 402.

‡ *Ibid.*

perfectly dry. When this is the case, the grains burst on being squeezed, their shell resounds when struck, and they no longer become heated on being placed in heaps. If the cacao is not sufficiently exposed to the sun it becomes mouldy; if too much, it withers and easily pulverises; in either case it soon rots *.

Depons who paid particular attention to the mode in which this valuable tree is cultivated in the province of Caracas, says, "less expence is also required "for an establishment of this kind, than for any o- "ther of equal revenue. One slave, as I have al- "ready said, is sufficient for the preservation and "harvest of a thousand plants, each of which should "yield at least one pound of cacao, in ground of "moderate quality, and a pound and a half in the "best soil. By an averaged calculation, of twenty "ounces to each plant, the thousand plants must "produce 12 hundred and fifty pounds, which, at "the customary price of twenty dollars per hundred, "produces two hundred and fifty dollars per annum "for each slave or labourer. The expences of the "plantation, including those of utensils, machines, "and buildings, are also less considerable for cacao "than for any other produce. The delay of the "first crop, and the accidents peculiar to cacao, can "alone diminish the number of planters attached to

* Depons' Travels in South America, vol. 1st, p. 403.

"its culture, and induce a preference to other com-
"modities *."

I shall now proceed to make a calculation of the expence and probable profit of a cacao plantation.

First cost of 320 acres (a half section) at 1s *per* acre, of which 80 acres are planted in cacao—250 trees on an acre,	£16	0	0
Clearing, planting, and fencing 80 acres, at 10s *per* acre,	40	0	0
Dwelling-house, drying sheds, &c.	30	0	0
Expence of 20 labourers at £13 *per* annum each, for 4 years,	1040	0	0
Total	£1126	0	0

Returns the fifth year.

From 80 acres of young cacao trees, may be expected the fifth year 10,000 lbs. which at £3 10s. *per* cwt. gives	350	0	0
Deduct annual charges for the fifth year,	260	0	0
Clear profit the fifth year,	£90	0	0

Returns the sixth and seventh years, viz.

80 acres, yielding 250 lbs. *per* acre, 20,000 lbs.	700	0	0

* *Depons'* Travels in South America, vol. 1st, p. 405.

Deduct annual charges, - 260 0 0

Clear profit sixth and seventh years, £440 0 0

Returns the eighth and subsequent years, viz.

80 acres yielding 312½ lbs. *per* acre —25,000 lbs. - - - 875 0 0

Deduct charges same as former years, 260 0 0

Clear profit the eighth year, &c. £615 0 0

From the above data it appears that a plantation of cacao, the original cost of which would be about £1126, would yield the fifth year from its establishment a clear profit of £90; the sixth and seventh year, £440; and the eighth and subsequent years £615. The observations I have made upon the most economical plan of establishing a coffee plantation, are equally applicable to cacao. Indian corn might also be planted the first year, in the intervals between the plants. Coffee is frequently, in South America, planted among the trees of a cacao grove. A cacao plantation when once established, is preferable to any other, on account of the great returns, and the small annual expence of labourers.

Tobacco,—called in Botany *Nicotiana*, received its name in honour of John Nicot, of Nismes, Ambassador from the French court to that of Portugal, who during his residence at Lisbon in 1560, receiv-

ed some of the seed from a Dutchman, who had it from Florida, and part of this he sent to France. There the plant soon became famous, as well as in Europe, by the name of Tabac, or Tobacco, from Tabaco, given it by Hernandez de Toledo, who first sent it to Spain and Portugal. It was not known in Europe till after the discovery of America by the Spaniards; and is supposed by some, to have been first imported into Great Britain in the year 1560 by Sir Francis Drake.

Tobacco requires a moderately strong, yet rich, compact, and deep soil, and one that is not too much exposed to moisture; indeed, a fresh, unimpaired spot of land, is best adapted to the culture of a plant, which is greedy of succulence. The tobacco seed is sown in beds; and so soon as the plants appear about two inches above the ground, and put forth at least six leaves, they are gently drawn, during damp weather, and carefully transplanted into a patch of land previously prepared for the purpose, being placed at the distance of three feet asunder. If this operation be carefully performed, the leaves will not undergo any alteration for the worse, but will recover their vigour in less than twenty-four hours. It is advisable to cover the plant with a banana leaf, to protect it from the heat of the sun, and the heavy rains. Four days afterwards it should be removed, in order to replace such plants as may not have taken root. The best time for planting is *either* the morning or evening.

The weeds which spring up around it must be carefully removed as they appear, its tops cut when it has grown to the height of two feet and a half. In order to prevent its attaining too great a height, suckers are to be carefully lopped off, and all the lower leaves, as well as those which appear likely to suffer by rottenness, or the attacks of insects, carefully removed, so as to let not more than eight or ten leaves at most remain upon the stem. One industrious labourer is capable of thus cultivating 2500 stalks, which ought to render a thousand pounds weight of tobacco.

The plant soon springs up and forms on the summit a bud, towards which the sap would direct itself, if a remedy was not applied. The means employed with success is to cut off the bud. The plant is then about one foot and a half in height. This operation is repeated when it has attained three feet. There are some persons who repeat it, even three times. In consequence of these operations, the tobacco becomes bushy, and acquires by degrees a colour between green and blue, a sign of the approach of its maturity. It is known to be ripe by a small bluish spot which forms itself at the point where the leaf joins to the stem; this commonly takes place in December. *

* Depons' Travels in South America, vol. 1st, p. 480.

The tobacco plant is allowed to remain about four months in the ground. "In proportion as it approach-"es to maturity, the bright vivid green of the leaves "assumes a darkish hue, the leaves themselves ap-"pear to droop and emit an odour, the strength of "which is daily augmented. When these symp-"toms are evident, and particularly when the odour "is perceived at some distance from the plant, the "tobacco is ripe, and may be cut down *." All the leaves do not ripen at the same time; because the sap is not equally distributed throughout the plant. Those leaves only are gathered of which the colour indicates their maturity. The others have not yet the essential juice, and would only yield tobacco without flavour. The gathering is continued and repeated as the leaves ripen †. The plants, when cut down, are placed in heaps on the land which produce them, and are left, for one night only, to sweat, or discharge their moisture, in the open air. On the following day they are deposited in sheds, so constructed as to admit the air on every side, and here they remain, hung at a distance from each other, till they become perfectly dry ‡.

* Mortimer's Commercial Dictionary, 2d. Edit. art. Tobacco.
† Depons' Travels in South America, vol. 1st, p. 480.
‡ Mortimer's Commercial Dictionary, 2d Edit. art. Tobacco.

Depons however says, that "it is highly important to the quality of the tobacco, that it should not be gathered except when the sun is in full force above the horizon; for the dews, or any other humidity, would by fermentation injure its constituent principles, and would render ineffective the benefits which it had already received from nature, and those which it might expect from a methodical preparation *." The same author further observes, that it is the practice in Terra-Firma, to arrange the plants on mats, as they are collected, covering them at the same time, so as they should be protected from the sun, and in this manner transported to the manufactory.

Twenty-four hours after the tobacco has been brought to the drying sheds, it is hung up on bars, in leaves of two and two, if in winter, and four and four if in summer. This is done to make the tobacco lose, by the action of the air, its tension and green colour, and to acquire instead a yellowness and softness which render it more flexible. If the weather is rainy it will require to be hung up for three days, and sometimes four; but if the weather is dry, two days are sufficient †.

When the tobacco has obtained the colour and softness above-mentioned, it is taken down, without

* Depons' Travels in South America, vol. 1st, p. 480.
† Ibid. p. 481.

very neat manner: the stalks are then taken out from the point, within four inches of the part where the leaf was united to the stem. This must be done cautiously with the fingers in order to prevent the leaf from being damaged. They are then laid on one side, and the damaged leaves and stalks on the other; care however must be taken not to place them in heaps, as there is still danger of their heating or fermenting.

At the same time, persons are employed to make coils or twists of the leaves, which they divide into balls of seventy-five pounds, which after the process of preparation will be diminished to twenty-five pounds. These operations require great celerity, because the leaves may dry, and consequently it would be more difficult to take out the stalk, and to twist them.

The interior of the cord is made, like segars, of broken or damaged leaves, which are covered with a good leaf. As soon as the ball is of the proper size, it is made anew, so that the outward end becomes the centre of the new ball. This is done to prevent it from untwisting.

The balls of tobacco are then placed on beds or layers, a foot thick, formed of the branches and stalks, and covered with the damaged tobacco. A covering of tobacco is likewise placed over the balls, and kept down by weights, or skins. All this re-

quires to be done in the shade and under sheds; it being absolutely necessary, to guard both against the sun and rain.

The tobacco is suffered to ferment for forty-eight hours, if it was too dry, when the large stalk was taken out, but only twenty hours if it was at its proper point. It is afterwards rolled anew, so that what was the exterior, now becomes the interior; and at the same time it should be highly moistened to prevent fermentation. The balls are then returned to their former place to ferment, and in this state they are left for twenty-four hours.

When the balls of tobacco have sufficiently fermented, they are exposed to the air, until they become cold; and for three or four days, they should be wound over every morning and evening. By this last process, more or less frequently repeated, the visible defects of the tobacco may be corrected. If its colour is blackish, its juice viscid, and its smell agreeable, it is considered to be entirely free from defect.

Lastly, the balls are unrolled, and the tobacco made up in bundles, which are suspended in the shade, that the tobacco may lose its superfluous humidity, and acquire that colour which influences its value in commerce. In damp weather a fire may be lighted underneath, or such materials placed, as will yield a thick smoke.

The exact period, that the tobacco should remain

in this state, it is not easy to determine, but it may be known, by opening the cord and squeezing it. If the juice run freely, the tobacco is not sufficiently dry. The usual time it takes is from forty to fifty days *.

The above is the usual process, as practised by the tobacco planters on the Spanish Main, and the following is the mode customary in Virginia.

The planter begins to clear the ground by girdling or cutting the bark of the large trees near the ground, and grubbing up the small ones; the ground is rendered soft and light by repeated working. The plants having previously been raised in a nursery, after the first rains, and when the ground is soft, are drawn, when about the height of four or five inches, and carried to the fields, where they are planted in beds, or little mounds, at the distance of three feet from each other; and, if a plant die, another is put in its place. This operation is performed by making a hole with the finger, and pressing the earth close round the top root. The plants are dropped into each hole by children. The earth is raised round the stalk by the hoe and shovel, three different times, in the shape of little hillocks; and the last operation is performed when the leaves are developed, and the plant has acquired a considerable growth. In about a month they are

* *Depons'* Travels in South America, vol. 1st, p. 483.

a foot high, when the top is pinched off, level with the ground or bottom leaves, leaving from eight to twelve. The young sprouts are broken off, lest they should draw the nourishment from the leaves, and the weeds are carefully kept down. The *tobacco* or *horse* worm is picked off and destroyed, otherwise this ravenous insect would devour whole fields in a very few days. The ground worm, which cuts the plant beneath the surface of the earth, must also be looked for and destroyed. The former is the favourite food of the turkies; flocks of which are driven into the grounds, and are more useful than a number of hands. In six weeks more, the plant has attained its full growth, being from five to seven feet high, and the ground is covered with the leaves. The change of colour of the leaves, from green to brown, after a clammy moisture or perspiration, indicates their maturity.

As the plants ripen unequally, they are cut as they become ripe. Every plant is hung up separately. After cutting, it is split three or four inches and cut off below the undermost leaf. This split is placed across a small stick, an inch in diameter, and four feet and a half long, and so close, that the plants touch, without pressing each other. The drying is hastened, by making slow fires on the floor below. After this the plants are taken down, and laid in rows or heaps, where they sweat a week or a fortnight; and in damp weather, are sorted and packed

up in hogsheads. For this last operation, more skill and experience are required than for any other. If not performed in moist or wet weather, they crumble to dust. The ground leaves and faulty tobacco are thrown away, as they are pulled from the stock. The *hands* or bundles are pressed down in the hogsheads with a large beam, one end of which is inserted with a mortice into a tree, and on the other a great weight is suspended. The finest flavoured tobacco is produced on a new and kindly rich soil, with an undulating surface. The second crop is inferior to the first, as the third is to the second *.

" In 1621, every person on board of nine ships, " which then arrived under the protection of Go- " vernor Wyatt, was obliged to raise a thousand " plants of tobacco, the produce of which was near- " ly a hundred pounds, and the price varied from " eighteen-pence to three shillings currency. A " hogshead of tobacco, weighing 1350 pounds, is " considered a good crop, and sufficient employment " for one labourer; or four plants to the pound, " though very rich land will yield double this quan- " tity †." In Louisiana it is calculated that 50 workmen ought to raise 60,000 pounds, which at ten dollars *per* cwt. would give 5357 dollars, or 107

* Warden's Account of the United States, vol. 2d, p. 208.
† Ibid.

to each hand*. In Maryland 6000 plants are found to produce about 1000 lbs. of tobacco†.

The following is a calculation of the expence and probable profits of a Tobacco plantation.

EXPENCES.

First cost of 160 acres of land at 1s. *per* acre, of which ten acres are planted in tobacco,	£8	0	0
House, Sheds, &c.	17	0	0
Clearing, planting, and fencing 10 acres, at 10s. per acre.	5	0	0
	£30	0	0

RETURNS.

10 acres of tobacco, at 1000 lbs. each, is 10,000 lbs. which at 4d *per* lb. will give	166	13	4
Deduct the expence of 10 labourers, one half women and children, at £1 each *per* month, for 4 months,	40	0	0
Clear Profit,	£126	13	4

It is calculated that 12 labourers will raise 15,000 lbs. of tobacco, which at 4d *per* lb. is £250 0 0

Deduct wages of 12 labourers, one

‡ Warden's Account of the United States, vol. 2d, p. 543.

§ *Ibid. p. 159.*

half women and children, at an average
of £1 each per month, for 4 months, 48 0 0

Clear Profit - - £202 0 0

In this country the Indians raise tobacco of a very mild and excellent quality; and there is no doubt, if attention were paid in selecting the seeds and soil, that a quality equal to the Havanna might be raised.

Rice,—Is a plant very much resembling wheat, both in shape and colour, and in the figure and disposition of its leaves. The panicle which terminates the stem is composed of small flowers, distinct from each other, which have four unequal scales, six stamina, and one pestil, surrounded with two styles; this pestil becomes a white seed, extremely farinacious, covered with two interior scales.

It grows to the height of two feet and a half, with a stalk not unlike that of wheat, but fuller of joints, and with leaves resembling that of the leek. It branches out into several stems, at the top of which the grain grows in clusters, and each of them is terminated with an ear or beard, and enclosed in a yellow rough husk. When stripped of this, they appear of an oval shape, of a shining white colour, and almost transparent.

Rice is of two kinds, namely, the *wet* and the *dry*; the former is that which is usually grown in low marshy grcunds. It is even customary, in less swampy places, provided a river or stream of water be convenient, to inundate the rice by means of sluices, and completely to soak the herb, so soon as it appears above the surface, as well as in its further progress towards maturity. The fibrous root of the rice plant puts forth stems, which generally grow to the height of four or five feet; these stems are chamfered thicker and firmer than those of wheat, and knotted with joints situated at equal distances: the leaves are long, fleshy, and somewhat similar to those of the leek; the flowers appear on the tops of the stalks or stems, are of a purple colour, and grow in clusters like the flowers of millet: to these succeed the seeds, which are of an oblong form, white, semi-transparent, and hard, and whereof each is enclosed in a yellowish, rough, chamfered, angulous, shaggy shell or rind, terminated by a point or spike, the whole being disposed alternately along the stems. This is the species of rice that is generally brought from the Levant.

The other species, called the *dry* rice, by reason of its being cultivated *without the aid of water*, is grown on dry lands, principally on the mountains, and possesses a saccharine flavour not unlike that of the filbert. The mountaineers of Cochin-China sow their rice in dry ground, as we sow our corn,

and always perform the operation at the end of the rainy season.

In Mangalore, the seed is generally planted like pease. If the plantation be situated in low ground, which receives the rain and absorbs the whole of it, the seed must be planted two feet asunder, with about four grains to every hole; but if the situation be a sloping one, or remarkably dry, the seed need only be eight or ten inches asunder, and planted about the depth of three inches from the surface, in furrows; the land may be afterwards strewn over with what seed remains. The rice usually appears above ground at the end of five or six days, provided the soil be fresh, but it remains much longer when the situation is dry; it ripens in about four or five months. One hundred pounds of rice in the husk, usually yields from 75 to 80 pounds of white rice. In India they cut it very close to the ground; and, from the roots, exceedingly delicate blades soon spring up, which are esteemed good fodder for the cattle.

The method of cultivating rice in China, is thus described by Mr Duhamel.

1. To hasten the sprouting of the rice, it is put into baskets, and soaked for some days in a standing water.

2. When their rice-grounds are so soaked with water as to be quite like mud, they are ploughed with a buffalo yoked to a plough, very simple in its make, having but one share, one han-

dle, and no wheels. 3. After a gentle rain, they break the clods with a kind of large hurdle, drawn by a large buffalo; the driver sitting upon it to increase the weight. 4. The ground is cleared of all stones, and whatever roots are in it are pulled up by a strong harrow, with great iron teeth. This instrument is drawn by a buffalo, and a man guides it by the help of two handles, like those of a plough, upon which he leans hard. The earth is like mud, and partly covered with water during all this operation. 5. The earth is afterwards smoothed with a harrow, which has several rows of teeth. A man guides this harrow by its two handles, whilst a buffalo draws it; and as fast as its teeth form little channels in the ground, the water runs in and fills them up. 6. When the rice that was laid to soak has sprouted, the seed is known to be good; and it is then sown by hand, very thick, and as equally as possible. Part only of the ground is sown in this manner, to furnish plants for the rest. The day after it has been sown, the points of the plants appear above the surface of the water; for the ground is overflowed all this time with just a sufficient quantity of water to cover it. And it is added, that when the plants have acquired a little strength, they are sprinkled with lime-water, to destroy the insects, and some of the weeds that would hurt them. For this purpose, a small basket is fastened to the end of a long handle, and dipt in the

lime-water, which runs through it, and is conveyed over the plants. And the Chinese have a great veneration for the first inventor of this method, which answers to the custom in Great Britain, of steeping wheat in lime-water, or manuring land with quick-lime. 7. Towards April, when the plants are grown strong enough to cover the whole field, and look very green and even, the greatest part of them is pulled up by handfulls; all the mud is carefully washed off their roots, and, being held at the same time as even as possible with one another, they are planted in tufts, pretty far asunder, and in a quincunx form, in fields prepared on purpose for them. A serene day is chosen for this operation, which must be performed as quick as possible. This practice of the Chinese is, he thinks, with respect to the common culture of rice, what the new husbandry is with respect to the common culture of wheat. 8. The rice must be watered, which is always done in China by overflowing it. To this end, the rice-grounds are always near a rivulet, pond, or great pool of water, from which they are separated only by a bank or causeway. If the water was higher than the rice-ground, a trench cut through the causeway would overflow it at once; but as it is generally lower, or on a level with the rice-ground, the necessary quantity is conveyed in pails or buckets, which are worked chiefly by the help of ropes. 9. Though a man cannot

step in these rice-grounds without being up to his knees; the Chinese weed them three times in a summer, and that with such care, that they pull up even the roots of every weed. 10. When the rice is ripe, which is known by its turning yellow, like wheat, it is cut down with a sickle, made into sheaves, and carried into a barn, where it is thrashed with flails, pretty much the same as in Europe; the straw is removed with pitch-forks and shovels, and the outer husk of the grain is taken off by beating it with great wooden pestles, or a kind of mallet, after which it is sifted and winnowed: and, lastly, to get off the under husk, the grain is put between two mill-stones, which are worked by a lever fastened to the upper one. But the two most remarkable circumstances of this culture are, 1st, The care which the Chinese take not to let their plants be too close together, lest they should rob one another of their food; and, 2dly, Their weeding their rice grounds three times in a summer, which answers the end of the hoeings recommended for the alleys between the beds of other grain, cultivated according to the horse-hoeing husbandry.

In South Carolina, on tide lands, the general produce of rice is from 1200 to 1500 pounds *per* acre of clean rice; on inland tracts from 600 to 1500 pounds*. In Louisiana, in common seasons, the

* Warden's Account of the United States, vol. 2d, p. 445.

produce *per* acre is estimated at fifteen barrels, each weighing 200 lbs. The nett value arising from 100 acres, cultivated by 50 workmen, is estimated at 700 barrels, which at six dollars a barrel, gives 4200 dollars, or 84 for each hand. It is calculated that there are 250,000 acres in Louisiana fit for the culture of this plant, which, yielding seven barrels an acre, at six dollars *per* barrel, would produce an annual revenue of 10,500,000 dollars*. And I may observe by the way, that there is an equal quantity fit for its cultivation in the territory of Poyais. Rice can be cultivated in places unfit for any other grain, and the crop is more certain.

The following is an estimate of the expence and probable profit of a farm cultivated in rice.

First cost of 160 acres of land at 1s. *per* acre, and of which 50 are planted with rice,	£8 0 0
Clearing and preparing the land at 10s *per* acre,	25 0 0
House and other buildings,	27 0 0
	£60 0 0

Returns, from 50 acres of land planted in Rice, at 2000 lbs. *per* acre, 100,000 lbs. which at 15s per cwt.

* Warden's Account of the United States, vol. 2, p. 333.

Deduct the wages of 25 workmen, one half women and children, for *one year*, - - - 240 0 0

Clear profit, £430 0 0

From the above it appears that with a capital of about £200, employed in a rice plantation, that a clear income of £430 *per* annum may easily be obtained.

Maize,—Commonly called Indian Corn, is a very productive grain; the size of its ears, when it is cultivated on good warm soils, being, on a medium, nearly a span long, having commonly eight or more rows of grain, each of which usually contains about thirty seeds of various colours, as red, white, yellow, blue, olive, greenish, blackish, speckled, striped, &c. sometimes in the same field and same ear; but the white and yellow are the most common; nor does this diversity of colour ever reach beyond the outside of the grain, the flower of which is always white, with a little tinge of yellow. The seeds, which are as big as large peas, are round at the outer surface, very smooth, and set extremely close in straight lines. The ear is clothed and armed with several strong thick husks, which defend it not only from unseasonable rains, and the cold of the night, but also from

birds. It has long leaves almost like the flag; at every joint, and at the top, a bunch of flowers of various colours.

The leaves of this plant when cut green, afford a good cattle-food, and the stalk and envelope of the grain dried in bundles, are equal, for cattle and sheep to the best hay. This grain is superior to all others for fattening cattle, hogs and poultry. The flour mixed with rye, in the proportion of a third, makes excellent brown bread, and is in common use in America.

In Louisiana, maize was cultivated by the Indians for their subsistence during great part of the year, and after the French were established in it, became an article of exportation to the sugar islands. The mode of culture was as follows: the canes growing naturally on the soil were cut down, and the trees stripped of their bark, to the height of two feet from the ground, in the beginning of March, when the sap was in motion. About fifteen days after, the whole was set on fire and consumed, and the maize sown the following day in squares of four feet asunder; the only trouble afterwards was to destroy the tender and brittle shoots which spring up from the roots of the cane, not destroyed by the fire.

In North America, the common method of preparing land for Indian corn, is in the fall, to plough it, or what is termed *flushing* it. The soil is mel-

ed in a rough manner by ploughing broad furrows; it being so thin, that it is not turned over, but stands very much on the edge. In the latter end of April, or beginning of May, the plan is, to *list* it out, that is, crossing the field five or six feet asunder, setting two furrows back to back, then the like the other way, which forms a sort of hill where their furrows cross each other. The practice is then to go with a large hoe, such as that its weight will break the clods, and also to make the mould very fine, something similar to the manner that gardeners prepare cucumber beds in field gardens. In these hills are put four or five corns. Reckoning four corns to one hill, four thousand only will be required to plant an acre containing a thousand hills. When the corn is come up, the custom is for the labourers to go with their hoes, and draw a little mould to the plants, destroy any weeds that may appear, and plant fresh corn, if any be wanting, which often happens; that done, to plough from those hills both ways, then to go with the hoes, and work the hills again, and to draw the plants of an inferior kind out, leaving two of the best on each hill, or, if the land be good, three and sometimes four, and to transplant those drawn out where any are wanting. Then to plough all the land towards the plants one way; after this, it is necessary to (what they term) *sucker* them, that is, to take off any young sprouts that

have littered, otherwise the corn will not grow in the ear to its proper length or size, but grow short, what they call *cobbings*; this done, just before it goes into silk, they plough the land to the corn the contrary way, which makes five times in all.

Good Indian-corn will grow from twelve to fourteen feet high; the white is much higher than the yellow, but the yellow kind is by far the sweetest, although the tops and blades are not so abundant. As soon as it is formed, they begin to eat it, in what is termed roasting ears; they boil them, and eat the corn in the same manner as we do green pease, with drawn butter. The blades and tops feed the horses, cattle, and sheep; the corn feeds both man and beast, and is very excellent food for fowls, hogs, &c. The people eat it in *hominy*, mush and bread, or cakes; the *hominy* is made in like manner to creed wheat buttered, by knocking the husk off in a wooden mortar; the mush is made of the flour as our hasty-pudding, and eaten with milk or treacle. The better sort of people make a very nice cake, with eggs and milk, about the thickness of what are called crumpets in London; the lower class of people mix the flour with water, make a sort of paste, and lay it before the fire on a board or shingle to bake, and generally eat it hot, as it is but very indifferent food when cold: it is called *Johny* cake.

In Indiana, on the best lands, the average produce is said to be from fifty to sixty bushels *per* acre. In South Carolina, on a good soil, well manured, the greatest produce is one hundred bushels an acre; but in the middle parts, in strong dry lands, the common produce is from thirty to fifty bushels; and, in the low country, it seldom exceeds thirty. In America it is a common practice to plant pease or pumpkins among the rows of the Indian corn.

In the territory of Poyais, there are three crops of Indian corn in the year, and the produce will generally exceed one hundred bushels an acre.

Estimate of the expence, and probable returns, of a farm, cultivated in Indian corn.

First cost of 160 acres at 1s. *per* acre, of which 50 acres are planted in Indian corn, - - - -	$	0	0
Clearing and fencing 50 acres at 10s. *per* acre - - - - -	25	0	0
Building a farm-house - -	12	0	0
Two horses, with harness and plough	12	0	0
Cows and hogs, poultry, seed corn, &c. - - - - -	13	0	0
	£70	0	0

Returns from 50 acres of land, planted in Indian-corn, at 100 bushels *per* acre, and at 4s. per bushel	1000	0	0
There will *at least* be another crop in the year, which ought likewise to produce	1000	0	0
	2000	0	0
Deduct the wages of 12 labourers, one half women and children	114	0	0
Clear profit - - -	£1886	0	0

From the above it appears, that a capital of less than £150 employed in the cultivation of Indian-corn, would produce an income of £1886!! The returns and price are both estimated *low*, and there is no danger of the price being reduced from the largeness of the quantity produced, as a ready market can at all times be found for it at Jamaica, and the other British West India islands, where immense quantities are consumed in feeding the negroes; and the planters upon seeing that they could obtain a regular supply, would soon abandon the raising of provisions, employing their slaves in the cultivation of the more valuable products of sugar and coffee.

As the large profits arising from such a farm, and on so small a capital, may startle some of my read-

ers, I beg leave to observe, that one hundred bushels *per* acre, is a frequent crop in Louisiana, and sells there for a dollar, or 4s. 8d. *per* bushel, and allowing for three crops in the year in the territory of Poyais, it would make the return 300 bushels *per* acre per annum. The best plan, however, would be to clear and prepare one hundred acres, planting fifty of them *in rotation*. Twelve labourers would be found to be quite sufficient for the cultivation of such a farm; add one half women and children

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Clear profit - £1886 0 0

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MANNERS AND CUSTOMS
OF THE
NATIVE INDIANS.

THE Natives are composed of two distinct breeds: the one, of the original Indians; the other, who are called Samboes, a mixture of these with Africans of the Samba country, occasioned, as is supposed, by a Dutch ship full of that people having been cast away, many years ago, to the southward of Nicaragua, from whence the negroes travelled to the Mosquito territory, where, after several rencounters with the natives, they had wives and ground allotted them *.

The Mosquito Indians were, formerly, very powerful and numerous; but they were much reduced, some years ago, by the small-pox. What their present number is, however, tho' since that visitation, it must have considerably increased, it is not possible to ascertain with any degree of accuracy.

* Edward's Hist. of the West Indies, vol. 5th, p. 210, App.
Henderson's Honduras, p. 178.
Wright's Memoir, p. 28.

Both tribes are well made, strong, and rather tall: the former have the colour of the thin Dutch copper, and long straight hair; the Samboes are of all shades between the Indian and the black, and their hair, in proportion as they approach the latter, partakes of the wool. The features of the whole nation indeed are rather agreeable: their foreheads are high, their noses inclining to the aquiline, their teeth good, and their eyes and hair black. The women are frequently handsome; their children, when young, are particularly so. Their habits and intercourse with each other denote much affection; the old and the young being found in continual association *.

The conduct of the people gives a very favourable idea of Indian nature. They are seldom guilty of positive evil, and often rise to positive good, when this latter quality does not require much exertion of mind. They possess modesty, docility, good faith, a disposition to friendship, and gratitude. They have good capacities, a great desire for information, are ingenious in learning any mechanic art, and set about what they undertake with a good will †, a cir-

* Henderson's Honduras, p. 216.

† The following fact is illustrative of this feature of their character. "There was a proposal from a Spanish mer-"chant, at that time, to cut a road from Black River on the "Mosquito shore into the province of Comayagua, which would "be a ready way to and from the South Sea, and would be a

cumstance unknown to any of those Indians who are in an abject state of submission to their fellow-creatures. They are hospitable to each other; are extremely attached to the British, of whose justice and magnanimity they entertain a most exalted opinion. A tradition has long prevailed amongst them, that the *grey-eyed people*, meaning the English, have been particularly appointed to protect them from oppression and bondage; and they may enviably be classed with the very few tribes whose liberties have remained uninterrupted by European aggression on this side of the Atlantic *.

The Samboes inhabit the country from Sandy Bay to Potook; they are tolerably numerous, rather indolent, most of their labour being performed by their wives. There is no mode of ascertaining their number; but Captain Wright, writing in 1808, says, from many circumstances, it may be inferred, that 500 men might be induced to follow an army,

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"means of the merchants going and coming with safety; "thereby preventing the Dutch from carrying on that valu- "able trade to Truxillo Bay, which they had so long mono- "polized. The Popyya (or Poyai) Indians, accordingly cut "the road, and drew their trade, as was intended, to Black "River; which hath thereby increased the profits of our com- "merce to a prodigious degree."

West India Pilot, p. 31.

* Edwards' Hist. of the West Indies, vol. 2d, p. 210. App. Henderson's Honduras, p. 212.
M. S. Memoir.

without injury to their own country. They are particularly useful as woodsmen, skilful in hunting, striking fish, managing batteaux, canoes, dorys, and pit-pans, either in rapid rivers, or high surf beaches. They have an idea, that in whatever services their friends or relations may lose their lives, or die a natural death, that all such must be paid for, and it has been regularly demanded, even in battle; when satisfactory answers have not been given, they have been known to retreat in a most dangerous and disorderly manner; as, on the contrary, if they had been promised payment, they might have materially assisted in defeating the Spanish dragoons, in the plains of either Matigulpha, or Watigulpha *.

They have no modes of public worship, nor could any particular forms of religious persuasion be found to prevail amongst them. They are not idolaters, but worship a God, or, as they say, a first and good principle, whom they allow to be the God of their friends the English. Like all other nations, however, in an early stage of civilization, they are subject to the general superstitions as to the existence of devils, the chief one of whom they call the Woolsaw, or evil principle, witchcraft, &c. They have a kind of priest called Sookie, a person of

* Wright's Memoir, p. 26.

high importance, and whose occult skill is ever regarded with the deepest and most implicit veneration *.

In common with most, if not with all Indian tribes, polygamy prevails, and a plurality of wives is the privilege of every husband in the Mosquito nation; but perhaps it has seldom been indulged, in equal extent, in any country. Many men here claim from two to six wives; few can be found satisfied with one: their late King surpassed all his subjects in this respect, he claimed no less than twenty-two! His Mosquito Majesty might very well have exclaimed with honest Launcelot—"Alas! fifteen wives is nothing." At the same time, it may be observed, that this circumstance is attended with far less inconvenience than might possibly be found annexed to it in most other situations; the numerous claimants for the affection or favour of their lord never discovering the least jealousy or hatred towards each other †.

The females, as in most Indian nations, are taken for wives at a very tender age, frequently when they have scarcely attained their tenth year. The contract for their destination in this respect is, not uncommonly, formed, at the hour of their birth,

* Henderson's Account of Honduras, p. 222.

The Columbian Navigator, *Directions for the Coasts of Terra Firma*, &c. p. 23.

† *Henderson's* Honduras, p. 222.

with the husband and the parents of the parties. From what would seem so premature an engagement, that which usually discovers itself in this sex, in such circumstances, must be expected to happen—an early appearance of advanced years. It is likewise observed, what is a natural consequence of the above, that the comparative difference in the duration of life in the sexes is very considerable.

A singular custom is scrupulously observed by the women of this nation. At the time of parturition, a habitation is prepared for them in the deepest recesses of the woods, to which, with a female assistant, they retire, and where they remain secluded from every eye for a stated period. This past, a public lustration of themselves and their offspring must take place previously to their being again admitted to the society of their relatives and friends †.

They have one law against adultery which has something curious in it. The fine imposed on the offender is, that he pay the injured husband an ox. This penalty the head-man of the particular tribe to which the adulterer belongs, is strictly bound, by long custom, to see punctually complied with, or one of his own cattle may be taken as a lawful indemnity. Should the latter happen, the chief then exacts, as an equivalent for what he loses by

* Henderson's Honduras, p. 223.
† Ibid.

the offence, a stated period of servitude from the offender *.

They have given sufficient proof of bravery by their many expeditions against the Spaniards in the Bay of Honduras, Carpenter's River, Coely, across the continent, &c. and in which they have seldom failed of success. About the year 1709, the Spaniards, for the first and last time, attempted to return their visits, with a tolerable armament; but an inferior number of those brave unconquered Indians lay in their canoes till they could cut them off from the shore, and then attacked them fairly on the open sea, destroying all of them but one man, whom they allowed to go back with such news as cured the Spaniards of invasions †.

Their dwellings are formed in a style of the rudest simplicity, being little more than a number of rough poles placed perpendicularly in the ground, and roofed with the leaves of the palmetto tree. They are usually large, and left entirely open at the sides. The floor is of clay, and in the center of it is the fire-place. Four or five of their houses are generally within call of each other, and such little hamlets are scattered all over the country. These habitations seldom contain more than one apartment, and this commonly affords accommodation to seve-

* Henderson's Honduras, p. 223.

† M. S. Memoir.

ral families. The bed of each, a mat, is placed on what is called a *barbecu*, a frame made of sticks, and raised a few feet from the ground. This, with a few earthen pots for cookery, are the chief articles of furniture *.

Remains of some of the old Mexican customs may be observed among them, and several kinds of stone and earthen vessels, and utensils embossed with figures, are found in many parts of the country buried in heaps, (probably at first with other things that have since decayed), which seems to indicate their having been, formerly, in a greater state of civilization than at present; but that to the sole resolution of defending their liberty, (which they have truly done) they sacrificed every thing else. The chief arts now among them are, making very durable cotton cloth, and thread or twine of silk grass for nets, and hammocks, lances, harpoons, bows, arrows, and canoes of all sorts and sizes. As in all other countries in a similar stage of civilization, where the subdivision of labour has not been, at least to any extent, introduced, every man is a tailor, hunter, fisher, and an extremely good swimmer. Yet those white men who have lived some time according to nature, and, by going without clothes, have arrived at the same use of their

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* Henderson's Honduras, p. 218.

limbs as is possessed by the Indians, are not inferior to them in athletic accomplishments *.

They wear little clothing; seldom any thing more, both men and women, than a small kind of wrapper, which reaches from the lower part of the waist to the middle of the thigh. The women decorate their persons with a profusion of beads, to which species of finery, like most, if not all Indian tribes, they are passionately attached, and very commonly paint their faces and necks with a kind of red ochre, which is found in their country. Their children go entirely naked; and, when young, are always borne on the back of the mother. All offices of the domestic kind are exclusively performed by the female: the male would be degraded by such services †.

These Indians may, in one respect, be thought to resemble the *improvisatori* of some other countries; their metrical effusions being entirely spontaneous, and usually thrown into a kind of measure, which, if it be rude and uncultivated, possesses, nevertheless, something peculiarly soft and plaintive to recommend it. The subjects which call forth their poetical effusions are chiefly of the latter description ‡.

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* M. S. Memoir.

† Henderson's Honduras, p. 217.

‡ Ibid. p. 224.

They are very fond of European commodities, in the choice of which they are influenced either by their real utility or gaudiness. Fire arms and edge tools they have now been so long used to that they could not do without them. They take nothing else in payment for what they earn or sell, money not being current among them *.

The chief things they traffic with are, tortoise-shell, canoes in the rough, horses, horned cattle, green turtle, turkies, fowls and parrots; and they hire themselves out to hunt, strike fish, or navigate small craft along the shore, and even the bars of the rivers, which last requires great skill, and in the performance of which they are particularly dexterous. But getting tortoise-shell is their grand employment from the age of fifteen to twenty. Peruaguas (large canoes,) with about twelve men in each, are employed on this from April to August. If they have formed any plan of an expedition, they choose this time to execute it, and therefore set out and keep together till it is over, otherwise they straggle from the first, and spread all the way from Blewfields to Baca del Drago †. The produce of their labour usually amounts to upwards of ten thousand pounds of shell.

They all talk a little English; but their own lan-

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* M. S. Memoir.

† Ibid.

guage is peculiar to themselves, as are some of their customs; to none of which however are they attached from any feeling of bigotry or superstition. Upon any other account, however, than as they illustrate the manners of the people, they do not seem deserving of attention. But, altogether, they are so superior to the neighbouring Indians, that their denominating these last *wild*, as the ancient Greeks called all the rest of the world *barbarians*, is no great comparative impropriety.

COMMERCE.

The Geographical position of this hitherto neglected country, being in the vicinity of some of the richest provinces of Spanish America, at nearly an equal distance between the southern part of the United States on the one hand, and the new Republic of Columbia on the other, being also within a convenient distance of the West India Islands, and close to the British Territory in Yucatan; together with the immense variety of exceedingly valuable commercial commodities, which are the natural productions of the soil, present of themselves, even independent of the operations of the planter or cultivator, a rich field for successful commercial industry.

It is well known, that although the Spanish provinces alluded to, are abundantly supplied with the precious metals, and with other commodities almost of equal value, (such as indigo, cochineal, &c.) they are in want of almost every article of British manufacture; and although the recent political changes which have taken place in Guatemala and Mexico, may, if completed, lead to a more liberal commercial policy, in so far as relates to the

introduction of European goods, it is not probable that the ancient duties, and restrictive regulations, will be so completely withdrawn, as to admit, by the Gulf of Mexico or Spanish ports in the Bay of Honduras, a supply of European goods, nearly sufficient for the demand, in the interior provinces of Mexico, and in the rich kingdom of Guatemala.

It therefore is evidently through the Territory of Poyais, possessing a south-western boundary, which reaches to within a short distance of the Pacific ocean, with rivers navigable a considerable way into the interior, and also trading paths, leading into the centre of the neighbouring provinces, that not only the latter kingdom, but also the south-eastern provinces of the Mexican empire, must be supplied with the merchandize of Europe; more particularly, whenever the navigation of the Gulf of Mexico shall be interrupted by hostilities between the United States and Spain, or any other power; an event which even at present is perhaps not far distant.

The advantages of this trade, even in its present state, are well known, and appreciated in the West Indies; and it has been computed, that even in the uncivilized state of the country, and independent of the native consumption, manufactured goods to the value of upwards of fifty thousand pounds pass annually into the Spanish American provinces, through this territory alone, yielding under every *disadvantageous* contingency, a very large profit to

the adventurers; and there is no doubt, that this trade, protected by a wise and liberal policy on the part of the Government of Poyais, may be carried to an extent, much beyond any calculation which can at present be formed, and that it will amply remunerate those who may become interested.

Notwithstanding, however, the great value of this trade, and the great length to which it may ultimately be carried, it can only be considered in a secondary point of view, when put in *present* competition with the immense gain which may immediately be derived, from the numerous and valuable commercial commodities which are the natural production of the territory itself, and which, independent of the labour of the planter or agriculturist, present an inexhaustible source of prosperity, to the intelligent and industrious European, aided as he will readily be, by the labour of a faithful, docile, and peaceable native population.

For immediate exportation to Europe and the States, and in return for the capital which may be employed, or for the European goods which may be imported for the native trade, or the supply of the settlers, the country abounds in mahogany of the finest description, and of every size; and as the good qualities of this useful, durable and beautiful timber, are every where becoming better known and appreciated, the consumption both in Europe

and in the States, is rapidly increasing; not only for the purposes to which it has hitherto usually been applied, but also for ship-building; and however the heavy duty in Britain may, if not removed or modified, affect the sale of the low qualities, mahogany will always form a leading article of export to Great Britain, as well as to the United States and continental Europe.

Dyewoods, such as logwood, fustic, Nicaragua wood, yellow sanders, &c. will likewise form not the least valuable part of a general cargo; there are, besides, a great quantity of other exceedingly useful and beautiful woods; such as cedar, Santa Maria, rosewood, zebrawood, lancewood, somewood, and many others; which, as their inestimable qualities (some of them have already been mentioned), become more generally known, will be everywhere eagerly demanded.

The medicinal gums and drugs, which are so plentifully dispersed throughout the country, and which can be collected in great quantity at a very small expence, will also form no inconsiderable part of the exports; amongst these are, the balsam capivi, dragons blood, gum copal, gum anime, caoutchouc, or gum elastic, and many others. Sarsaparilla, the consumption of which as a medicine, is rapidly increasing over all Europe, may also be procured in great quantity; and even so long ago as the year 1769, above two hundred thousand

pounds of this valuable drug, was in that year exported * principally to England, and there is no doubt that double, or perhaps triple that quantity, might now be annually collected. Many medicinal barks and woods may also be found in this country, and would liberally repay the researches of a good medical botanist.

Vegetable oils will likewise, in a very short time, become a considerable part of the exports from this territory; castor oil, palm oil, and many others, could be prepared in great quantity; and the experience derived from the success of former settlers, or adventurers, who made considerable fortunes by the preparation of this commodity, proves that it is one which well deserves attention.

Amongst other articles, a quantity of beautiful skins and furs, will be procurable by barter or purchase, from the natives and the surrounding tribes, such as leopard, tiger, antelope, and other skins, besides small peltry. Cow, ox and horse hides, will also ultimately be obtained in sufficient quantity to become worth shipping.

The great variety of timber with which the forests abound, affords abundant materials for the manufacturer of pot and pearl ashes; and the immense ridges of pitch pine, which in endless tracts are interspersed all over the country, supply an inexhaustible fund of tar, pitch, turpentine rosin,

* Bryan Edwards' History of the West Indies, 5th Edition.

&c. "the trees being so redundant with these li-
quors, that when put into the deepest rivers,
"they instantly sink *." The expence and trouble of preparing these articles, in a country where provisions are abundant, and where labour can be had on moderate terms, is well known to be trifling; besides, the manufacture of these articles will in some measure be connected with the preparation of lumber, for the supply of the British settlements in the West Indies, a most important branch of trade to be hereafter mentioned, and which with the raising of provisions for the same destination, will no doubt meet with the decided support and encouragement of His Highness the Cazique of Poyais.

Tortoise-shell, and turtle, will always form another exceedingly valuable article of export; and it will no doubt be the policy of the Government of Poyais, to protect and encourage the turtle fishery on its own shores, as much as possible. The hawksbill turtle, from which the shell is procured, is very abundant on the coast; and even so far back as the year formerly mentioned, upwards of ten thousand pounds weight of tortoise-shell, was sent to the mother country, by the British settlers, in that year †. Now, when a method has been discovered for preserving the flesh of the turtle for exportation to Europe, it has (even independent of

* Wright's Memoir.

† Bryan Edwards' History, 5th Edition.

the shell,) become another article to be added to the list of exports, and an additional source of profit to the merchant.

Methods will no doubt be discovered, to preserve for exportation in a similar manner, many of the other luxuries with which this territory is so liberally supplied; and as the quantity of fish on the shores, and in the bays, lagoons, and rivers, is most abundant, and salt can be produced in any quantity, a very lucrative fishery, with a market at a very short distance, might unquestionably be established. Oysters of the most delicious quality, could be exported to any extent required, and other descriptions of provisions will, it is probable, be in course of a little time prepared for foreign markets.

There are undoubtedly many other very valuable articles of merchandize, which, independent of agriculture, are the natural production of the soil; but to notice each of them at length, would extend the present chapter beyond the limits assigned. It may however be proper to notice, that the territory does not exclusively depend upon foreign or inland trade, for a supply of the precious metals, or for the valuable dyes mentioned at the commencement of this article. There being, as has been formerly stated, not only gold mines in the territory, but gold dust is also found in the rivers. Moreover, indigo is an indigenous plant, of the same kind, as

that from which the finest indigo of Guatemala is produced; and the cochineal insect, both as regards food and climate, will doubtless thrive equally well in this country, as in the neighbouring provinces, where it is produced in such abundance: Annatto or nankeen, and several other dyes, are also the produce of this territory; and it has been said, that on a part of the coast is found, a small shell-fish, which affords *the true Tyrian dye.*

Pimento, ginger, Guinea pepper, and many other spices, are also natural productions of the country; and, together with fruits, such as lemons, oranges, limes, cocoa-nuts, tamarinds, and various preserves, will undoubtedly in a short time become very valuable export commodities.

The ready supply of the British West India Islands with provisions, lumber, &c. is a matter of such immense importance to Great Britain, and is in every point of view, so much conducive to the welfare and prosperity of Poyais, that it will undoubtedly meet the particular attention, support, and encouragement of both Governments.

To the intelligent and industrious European settler, in Poyais, it presents an inexhaustible field for his most active exertions, with the certainty of ample and immediate remuneration for the labour and capital which he may be able to bring forward.

To give some idea of the immense amount of the supplies required for the British settlements in

the West Indies, and the consequent extent of the demand which may be expected for the produce of Poyais, it appears unnecessary to state any thing more than the following list of the quantities of provisions, lumber, &c. which were imported into and for the consumption of *Jamaica alone* for one year, viz. from the 29th day of September 1815, to the 29th day of September 1816, agreeable to a general return, which has been laid before the Honourable House of Assembly of that island. These supplies consisted of 60,947 barrels of flour; 4,875 barrels, 7,485 bags, and 7,198 kegs of bread; 2,942 tierces, 1,740 barrels, and 2,849 bags of rice; 52,190 bushels, 1,578 bags, and 16,043 barrels of *corn and meal*; 497 barrels and 800 bags of *pease*; 1,972 hhds. 7,109 casks, 3,358 boxes and 778 quintals of *dried fish*; 534 tierces, 19,170 barrels, and 991 kegs of *pickled fish*; 40,204 barrels of herrings; 9,375,943 *staves* and *heading*; 10,071,830 *shingles*; 9,192,775 feet of *timber*; together with 2,035 *horses*, 6,211 *mules*, 501 *asses*, and 5,675 *cattle*. This list does not include beef, pork, butter and other articles; and according to a return made a few years prior to the one above stated, these three necessaries amounted to the great quantity of 97,750 barrels of beef and pork, and 64,009 firkins of butter. It must however be observed, that the last mentioned supplies, were not for the use of Jamaica alone, but for the British West In-

dia Islands, generally, with the exception however of the conquered Islands of St Lucia, Tobago, and Trinidad. The supplies requisite for *Jamaica alone*, being so extensive, it may fairly be calculated, that for the consumption of the whole British possessions in the West Indies, together with the British continental colonies of Berbice, Demerara, Essiquiba, and Balize in Yucatan, two or perhaps three times the amount of provisions furnished to Jamaica in 1816, are necessary, with at least three or four times the quantity of lumber; and these immense supplies are even independent of what is required for the islands and settlements belonging to other powers, in that quarter of the globe. Without going farther into this subject, however, it is hoped enough has been said to prove, that a market exists in the immediate neighbourhood of Poyais, capable of consuming the utmost quantity of lumber and provisions, which can (at least for several years to come,) be exported from that Territory, and consequently, that instant remuneration is presented for such labour, and capital, as may be engaged, either by the merchant in preparing lumber, or by the agriculturist in raising provisions; or, what is likely to be still more profitable to early settlers from Europe, the conjoining together these two important sources of gain. The country, possessing rivers navigable a considerable way into the terior, and being abundantly supplied with

streams of water, every facility is presented for erecting at a very moderate expence, saw-mills, in the centre, as it were, of the immense pine forests, so plentifully interspersed all over the country; while, at the same time, the rafts of prepared lumber, and such other more valuable timber as might be ready for exportation, could, with the greatest ease imaginable, be floated down to the shipping port, or eventually, put *immediately on board* the small traders, usually employed in navigating the Gulf of Mexico, and Carribbean sea.

A very moderate capital, in the hands of an intelligent and industrious person, is adequate to such an undertaking, which of itself, would be a sufficient foundation for more extensive operations, leading in the end to affluence and prosperity; and if combined, as it might easily be, with the raising of stock, growing of Indian corn, &c. a very rapid fortune might be accumulated. The native Indians are well known to be excellent axe-men, and their labour could be obtained for very moderate wages, the greater part of which would be paid in trifling articles of European manufacture or produce, which could be purchased or imported for very little money.

In addition to the saw-mills which are now about being erected, and to those above-mentioned, the construction of a few powerful steam saw-mills in the vicinity of the principal shipping ports, for

the purpose of preparing timber of every description, not only for foreign markets, but also for sale to the settlers, and for ship-building, would undoubtedly, under proper management, yield an immense return to any commercial company of sufficient capital for the undertaking; and as such establishments would contribute to the general prosperity of the state, there is no doubt, on these persons becoming to a certain extent interested in the soil, the government of Poyais would give them every possible facility and encouragement.

Although the demand for the markets of Europe, and for the use of the settlers, will undoubtedly be considerable, it is by exporting to the West India Islands, as already stated, that the merchant must in the first instance look for a steady demand and ready market, for every description of lumber and provisions.

The soil and climate being so well adapted for the production of Indian corn, (which can be raised at three different periods within the year) it will perhaps be the interest of the early settler to pay immediate attention to the extensive growth of this article; and when this valuable commodity, together with rice, pease, and other pulse, is fully cultivated; when the immense savannahs or plains are stocked with the numerous herds of cattle which they are capable of rearing; and when proper establishments are formed for curing provisions

and fish for exportation, it may be hoped that the assertion made some years ago in the British Parliament, "*that the produce of the soil of the United States, was necessary to the existence of the British West Indies,*" can no longer be repeated with the least appearance of truth,—a circumstance devoutly to be wished by every person interested in the welfare of Great Britain.

Although these matters are unquestionably of vital importance, in the first instance, it is not to them alone that the intelligent settler in Poyais must in the end look for remuneration, or to increase the value of his property; neither must the commercial man consider them the only commodities which are of importance to him; on the contrary, the soil and climate being well adapted for the cultivation of all and each of those valuable commercial articles, which have rendered the West Indies so important, there is no doubt that the agriculturist will, while he pursues the objects pointed out for more immediate attention, keep steadily in view, and gradually adopt, to a certain extent, the culture of the valuable articles alluded to, more especially coffee, cotton, tobacco, cocoa, &c. and although the cultivation of the sugar-cane, and the manufacture of sugar and rum, will perhaps require a larger capital than it may be in the power of the generality of settlers to advance at the commencement, or that it may be prudent in them to divert *at first*, from the

more immediate raising of stock and corn, there is no doubt, as a planter's means increase, he will find it his interest to introduce gradually and slowly by degrees, the cultivation of those more valuable commercial commodities which constitute the wealth of the West India planter. Some years previous to the removal of the English settlers from Poyais, several sugar plantations had been formed at Black River, and the sugar and rum which they produced was very generally deemed equal to the produce of Jamaica *, and Captain Wright, in his Memoir, goes so far as to say that, from his own personal knowledge, together with what he had learned by reading and reflecting on the subject, corroborated by "many a long and prolix con-"versation with aged natives," this country, if properly cultivated, would be able "to supply the "whole world with rum, sugar, coffee, cocoa, and "molasses †."

Although these commodities, when produced for sale, will not at first be considerable in amount, they will no doubt gradually be brought forward for exportation; and they will consequently extend the operations of the merchant, affording him additional materials for an extensive trade with Continental Europe, and North and South America, and the

* Henderson's Honduras, p. 39, 40.

† Wright's Memoir, p. 29.

ready means of paying for the merchandize requisite, for the valuable trade mentioned at the commencement of this chapter.

It would, perhaps, be premature to speculate upon the consequences to Poyais, which in a commercial point of view, must inevitably follow the opening a communication between the Atlantic and Pacific oceans. The practicability of such a measure has never been doubted, and that it will ultimately take place through a part of the Mosquito Territory, or in its immediate neighbourhood, under its controul, seems to be a prevalent opinion. —As a commercial depot, and otherwise, Poyais will undoubtedly derive incalculable benefit from the commencement and completion of such a measure.

The late act of Parliament for the regulation of the trade, between America and the British West Indies, gives every requisite facility and encouragement to the commercial operations of Poyais, whether as regards the trade to the British settlements in the West Indies, or elsewhere: and as the establishment of *free-ports*, in that part of the world, by a neutral government, and under wise regulations, is a matter of such immense advantage to all parties, there is no doubt, equal facilities will be allowed by the United States, and the other governments of America and Europe.

It will perhaps be the policy of the government,

and the interest of the merchants of Poyais, to encourage as much as possible, the employment in the first instance, of British built vessels, together with such Americans as may be requisite for the trade with the United States, more especially, as the construction of a sufficient number of vessels for the protection of the coast and neighbouring seas, from the depredations of piratical vessels, and for other purposes, together with the building of small trading craft, may perhaps at first be sufficient employment for the dock-yards about to be established. There is no doubt, however, that as the country affords abundant materials of almost every description, ship-building will ultimately become a very profitable and important branch of trade.

To those persons who, from limited means or otherwise, are obliged, in the first instance, to confine themselves to a small share of the country trade, the wants of the settlers and natives present a ready market for any quantity of small wares, such as hardware, cloathing, &c. of every description; in exchange for which, they will receive tortoise-shell, gums, dye-woods, gold dust, &c. and by care and industry, their operations will gradually and quickly increase with their means.

In short, it is hoped, that considering the extensive trade which may ultimately be carried on with the European Colonies in the West Indies, as well as with Great Britain—The United States—Mexi-

co,—South America and Continental Europe,—the advantages to be derived from the establishment of free ports, (especially whenever the navigation of that part of the globe shall be disturbed by belligerents)—the relative position—valuable natural productions—fine climate, and internal capabilities of this neglected country,—enough has been said to prove the great encouragement, and manifold advantages, which must be derived from commercial establishments in the Territory of Poyais: and now, that the well known political circumstances are removed, which have hitherto retarded the advancement of this fine country, in civilization and in the scale of independent states, there seems no reason whatever to doubt, that, protected by the wise and vigorous administration, sound policy, and comprehensive views of His Highness the Cazique of Poyais, this beautiful country will rapidly advance in prosperity and civilization, and will become, in every point of view, and within a very short period, not the least considerable of those radiant realms beyond the Atlantic wave.*

* Edwards.

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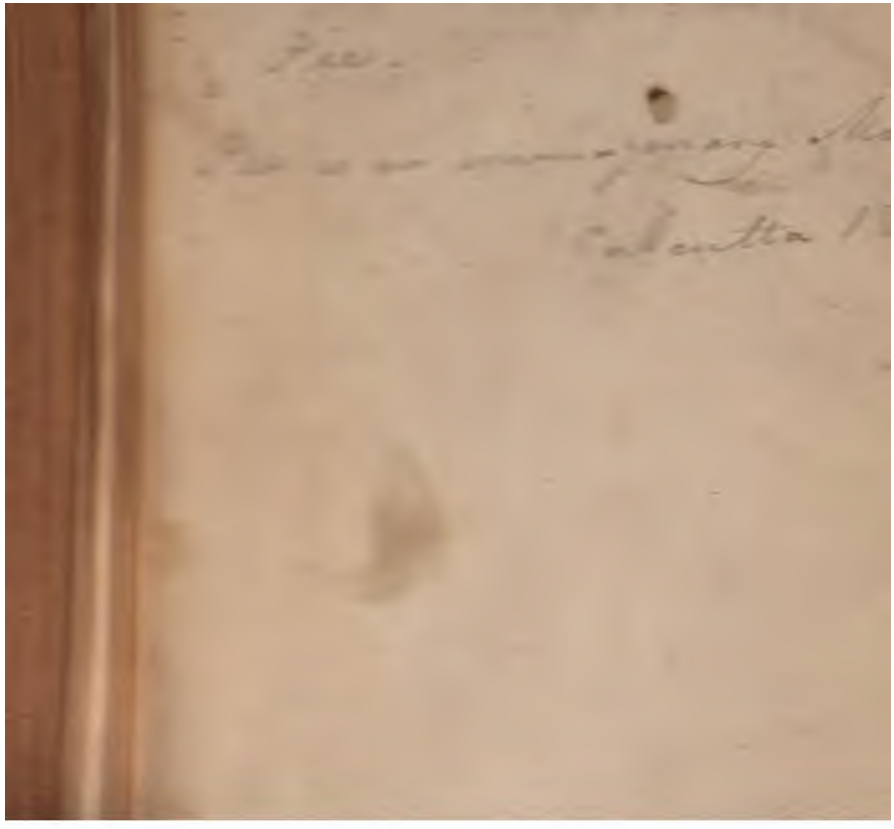

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